Student Performance by Content Standard on the Montana Comprehensive Assessment System,
Phase 2 (MontCAS)

Montana Criterion-Referenced Test – Spring 2004
1st Administration

Grades Four, Eight, Ten
Reading and Math

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Executive Summary

The results presented in this report summarize state-level performance at grades four, eight and ten for the Montana Reading and Mathematics Content Standards that were assessed during the spring 2004 administration of the Montana Comprehensive Assessment System Criterion-Referenced Test (CRT). Student performance at grades four, eight and ten was disaggregated by ethnicity, by free and reduced lunch status, by Limited English Proficient/English language learner (LEP/ELL), and by gender. Subgroup and state-level performance for each grade was reported as the percent of correct items obtained within in each of the Reading and Mathematics Content Standards.

Reading

Fourth grade students (N=10672) obtained the greatest percent of items correct for Reading Content Standard 1 and the least percent correct for Reading Content standard 5. White fourth grade students (N = 8945) obtained the highest percent of correct reading items on Reading Content Standards 1, 2, and 5. Asian fourth grade students (N=106) earned the highest percent correct on Reading Content Standard 3. Fourth American Indian students (N=1252) obtained the lowest percent of reading items correct. Fourth grade students across the state earned an average score of 1.9 on four point open-response items administered to assess Reading Content Standard 1. Asian students (N=106) earned the highest average scores on open-response reading items while American Indian students (N=1252) obtained the lowest average scores.

Eighth grade students (N=12198) obtained the largest percent of items correct for Reading Content Standard 5 and the least percent correct for Reading Content standard 1. Asian eighth grade students (N=101) obtained the highest percentage of items correct on Reading Content Standards 1, 2, and 4 while White Students (N=10,368) obtained the highest percent of items correct on Reading Content Standard 5. Eighth grade American Indian students (N=1397)

obtained the lowest percent of reading items correct. Eighth grade students across the state earned an average score of 1.9 on four point open-response items administered to assess Reading Content Standard 1. Asian students (N=101) earned the highest average scores while American Indian students (N=1397) obtained the lowest average scores for these open-response items reading items.

Tenth grade students (N=11944) obtained the highest percent of items correct within Reading Content Standards 1 and 4 with the lowest percent correct found for Reading Content standard 5. White (N=10372) and Asian (N= 120) tenth grade students obtained the greatest percentage of items correct for all the reading standards while American Indian students (N=1177) obtained the lowest percent of items correct for each of the four reading standards. Tenth grade students across the state earned an average score of 2.0 on four point open-response items administered to assess Reading Content Standard 2. Asian students (N=120) earned the highest average scores while American Indian students (N=1177) obtained the lowest average scores for the open-response items reading items.

Results from analysis of student performance on Reading Content Standards by *free and reduced lunch status* for grades four, eight and ten found that students classified as *on free and reduced lunch* obtained a consistently lower percentage of items correct than students who were *not on free and reduced lunch* status. Fourth grade *free and reduced lunch* students averaged 61 percent of reading items correct across all reading standards as compared to an average of 71 percent of items correct for fourth grade student not classified in the *free and reduced lunch* category. Tenth grade *free and reduced lunch* status students averaged 65 percent of reading items correct across all reading standards as compared to an average percent correct of 74 percent for tenth grade students not classified in the *free and reduced lunch* category. Eighth

grade *free and reduced lunch* averaged 65 percent of reading items correct across reading standards as compared to an average of 73 percent correct for eight graders not classified in the *free and reduced lunch* category indicating their performance to be the least discrepant from *non-free and reduced lunch students* for all three grades. Fourth, Eighth and Tenth grade *free and reduced lunch status* students also obtained average scores on four point open-response items administered to assess Reading Content Standards 1 and 2 that averaged only .3 point below the average score of 2.0 for *non-free and reduced lunch* students for all three grades.

Results from analysis of student performance on Reading Content Standards by Limited English Proficient/English Language Learner (LEP/ELL) status for grades four, eight and ten found that students classified as LEP/ELL obtained a much lower percentage of reading items correct than students who were not classified as LEP/ELL. Fourth grade LEP/ELL students earned on average 46 percent of reading items correct for all standards as compared to an average of 68 percent for fourth grade students not classified as LEP/ELL. Similar results were found for eighth grade LEP/ELL students who obtained an average 46 percent of reading items correct as compared to an average of 69 percent correct for non-LEP/ELL students. Tenth grade LEP/ELL students obtained an average of 48 percent of reading items correct as compared to 73 percent for non-LEP/ELL tenth grade students. Fourth, Eighth and Tenth grade LEP/ELL students obtained average scores on four point open-response items administered to assess Reading Content Standards 1 and 2 that averaged .7 points below the average score of almost 2.0 across all three grades for students not classified as LEP/ELL.

Results from analysis of student performance on Reading Content Standards by Special Education status for grades four, eight and ten found that students who were on Individualized Education Plans (IEPs) obtained a much lower percentage of reading items correct than students

who were not on IEPs. Fourth grade Special Education students earned an average of 50 percent of reading items correct for all standards as compared to an average of 70 percent for fourth grade students not on IEPs. Eighth grade Special Education students obtained an average 48 percent of reading items correct as compared to an average of 70 percent correct for eighth graders not classified as Special Education students. Tenth grade Special Education students obtained an average of 49 percent of percent of reading items correct as compared to an average of 73 percent correct for tenth graders not classified as Special Education students. Fourth, Eighth and Tenth grade Special Education students obtained average scores on four point open-response items administered to assess Reading Content Standards 1 and 2 that averaged .7 points below the average score of 2.0 for students not on IEPs across all three grades.

Analysis of results from Reading Content Standards by gender revealed that fourth, eighth and tenth grade males and females performed at levels similar to state performance at all three grade levels. Female students obtained a slightly higher percent of reading items correct across reading standards than their male counterparts. Female fourth grade students earned an average of 68 percent correct reading items across all four reading standards as compared to their male counterparts who earned an average of 66 percent of reading items correct. Female eighth grade students earned on average 70 percent of reading items correct across all standards as compared to males who earned an average of 66 percent reading items correct. Tenth grade females obtained an average of 76 percent of reading items correct across reading standards as compared tenth grade males who earned an average 69 percent of reading items correct across all reading standards. Fourth, eighth and tenth grade female students also slightly outperformed male student and state averages for each grade level for the open-response items administered to assess Reading Content Standards 1 and 2.

Mathematics

Fourth grade students obtained the highest percent of mathematics items correct for Mathematics Content Standard 6 and the least percent correct for Reading Content standard 7. Asian fourth grade students (N=106) obtained the highest percent of mathematics items correct on Mathematics Content Standards 1,2, 4, 5, and 7 while White fourth grade students (N=8945) earned the highest percent of items correct on Mathematics Content standards 3 and 6. Asian students earned the highest average scores for open-response mathematics items while fourth grade American Indian students earned the lowest average scores on these items.

Eighth grade students obtained the greatest percent of items correct for Mathematics Content Standard 7 and the lowest percent correct within Mathematics Content standard 5. Asian eighth grade students (N=101) obtained the highest percentage of items correct for all seven mathematics standards while fourth grade American Indian students (N=1397) obtained the lowest percent of mathematics items correct for each mathematics standard. Eighth grade Asian students earned the highest average scores for open-response mathematics items while eighth grade American Indian students obtained the lowest average open-response item scores.

Tenth grade students obtained the highest percent of items correct for Mathematics Content Standard 7 and the least percent correct for Mathematics Content standard 1. Asian tenth grade students (N=120) obtained the highest percentage of items correct for Mathematics Content Standards 1,2,3,4,6, and 7 assessed while White tenth grade students (N=10372) obtained the highest percent of items correct for mathematics standard 5. American Indian tenth grade students (N=1177) obtained the lowest percent of items correct for each of the seven mathematics standards assessed. Again, Asian students (N=120) earned the highest average

scores for open-response mathematics items while tenth grade American Indian students obtained the lowest average scores for these same open-response items.

Results from analysis of student performance on Mathematics Content Standards by free and reduced lunch status for grades four, eight and ten found that students classified as *On Free and Reduced Lunch* obtained a consistently lower percentage of items correct than students who were *Not on Free and Reduced Lunch*. Fourth grade *free and reduced lunch* students obtained an average of 58 percent items correct across all seven mathematics standards as compared to an average for all seven standards of 66 percent correct for fourth grade students not classified as *on free and reduced lunch.* Eighth grade *free and reduced lunch* students obtained an average of 40 percent of items correct across all seven mathematics standards as compared to an average for all seven standards of 56 percent correct for eighth grade students not classified as *on free and reduced lunch.* Tenth grade *free and reduced lunch* students obtained an average of 41 percent items correct across all seven mathematics standards as compared to an average for all seven standards of only 49 percent correct for tenth grade students not classified as *on free and reduced lunch.* The smallest gap achievement gap between students *on free and reduced lunch* and *not on free and reduced lunch* was the 8 point difference found for tenth grade students. Fourth, eighth and tenth grade *free and reduced lunch* students performed just slightly lower than *non-free and reduced lunch* students on open-response items administered to assess Mathematics Content standards at their respective grade levels.

Results from analysis of student performance on Mathematics Content Standards by Limited English Proficient/English Language Learner status for grades four, eight and ten found that students classified as LEP/ELL obtained a much lower percentage of mathematics items correct than students who were not classified as LEP/ELL. Fourth, eighth and tenth grade

LEP/ELL students earned on average of 15 percent less correct mathematics items when compared to their same grade-level English language peers. Fourth grade LEP/ELL students obtained an average of 48 percent items correct across all seven mathematics standards as compared to an average for all seven standards of 64 percent for fourth grade students not classified as LEP/ELL. Eighth grade LEP/ELL students obtained an average of 30 percent of items correct across all seven mathematics standards as compared to an average for all seven standards of 47 percent correct for eighth grade students not classified as LEP/ELL. Tenth grade LEP/ELL students obtained an average of 32 percent items correct across all seven mathematics standards as compared to an average for all seven standards of only 48 percent correct for tenth grade students not classified as LEP/ELL. Fourth, eighth and tenth grade LEP/ELL students scored well-below those students not classified as LEP/ELL on four point and one point open-response mathematics items.

Results from analysis of student performance on Mathematics Content Standards for Special Education students at grades four, eight and ten found that students on individualized education plans (IEPs) obtained a much lower percentage of mathematics items correct than students who were not on IEPs. Fourth grade Special Education students obtained an average of 51 percent items correct across all seven mathematics standards as compared to an average for all seven standards of 65 percent for fourth grade students not on IEPs. Eighth grade Special Education students obtained an average of only 31 percent of items correct across all seven mathematics standards as compared to an average for all seven standards of 48 percent correct for eighth grade students not placed in the Special Education. Tenth grade Special Education students obtained an average of 32 percent items correct across all seven mathematics standards as compared to an average for all seven standards of only 49 percent correct for tenth grade

students not placed in Special education. Fourth, eighth and tenth grade Special Education students scored well-below those students not IEPs on four point and one point open-response mathematics items.

Results of student performance by gender across mathematics standards for grades four, eight and ten show that males and female performance was very similar across grade levels. Fourth grade female students obtained an average of 64 percent items correct across all seven mathematics standards as compared to an average 63 percent correct for fourth grade males. Both eighth grade female and male students obtained an average of 46 percent items correct across all seven mathematics standards. Tenth grade male students obtained an average of 48 percent items correct across all seven mathematics standards as compared to an average 47 percent correct for female tenth grade students. Fourth, eighth and tenth grade females performed just slightly above male and state averages on four point and one point open-response mathematics items.

Introduction

The spring 2004 administration of the Montana Comprehensive Assessment System Criterion-Referenced Test (CRT) involved 34,814 students enrolled in grades four, eight, and ten. This report summarizes state-level student performance for each of the reading and mathematics content standards assessed by the Montana Criterion-Referenced Test (CRT). Six separate analyses were conducted to disaggregate student performance for grades four, eight, and ten by ethnicity, by free and reduced lunch status, by Limited English Proficient/English language learner (LEP/ELL), and by gender.

Method and Procedures

Correct responses were summed for all items administered to assess a content standard. The sum of correct responses was then divided by the total number of responses to determine the percentage of items answered correctly for each reading and mathematics content standard. The open-ended items administered to assess the Reading Content standards were scored using either a four-point while Mathematics Content standards were assessed on both four point and one point open-response items. Average scores for both four point and one point item are reported by content standard. No results are reported for Reading Content Standard 3 because it could not be measured by this statewide assessment.

Standards Assessed

Reading

1. Students construct meaning as they comprehend, interpret, and respond to what they read.

2. Students apply a range of skills and strategies to read.

3. Students set goals, monitor, and evaluate their progress in reading – cannot be measured by standard assessment.

4. Students select, read, and respond to print and nonprint material for a variety of purposes.

5. Students gather, analyze, synthesize, and evaluate information from a variety of sources, and communicate their findings in ways appropriate for their purposes and audiences.

Mathematics

1. Students engage in the mathematical processes of problem solving and reasoning, estimation, communication, connections and applications, and using appropriate technology.

2. Students demonstrate understanding of and an ability to use numbers and operations.

3. Students use algebraic concepts, processes, and language to model and solve a variety of real-world and mathematical problems.

4. Students demonstrate understanding of shape and an ability to use geometry.

5. Students demonstrate understanding of measurable attributes and an ability to use measurement processes.

6. The students demonstrate understanding of an ability to use data analysis, probability, and statistics.

7. Students demonstrate understanding of and an ability to use patterns, relations and functions

Reading Performance Disaggregated by Ethnicity

The percentages of reading items answered correctly by ethnicity and grade level for each reading standard are reported in Tables 1-4 and Appendices A, B & C. Average scores for the open-response reading items are reported in tables 5 and 6. Fourth grade students' performance on items administered to assess each of Montana's reading standards ranged from correct 61 to 72 percent correct. The highest percent of items correct for fourth grade students was found on Reading Content Standard 1 (72 percent correct); the lowest percent correct was on Reading Content Standard 4 (61 percent). In addition, fourth grade students averaged 1.9 points out of four possible points for the open-response reading items written to assess fourth grade Reading Content Standard 1. White fourth grade students (N= 8945) achieved the highest percent of correct responses across all reading standards and average open-response scores, while fourth grade American Indian students (N=1252) achieved the lowest percent of reading items correct and the lowest average open-response scores for this group of items.

Eighth grade student performance on items administered to assess reading standards ranged from 65 to 73 percent correct. The highest percent of items correct for eighth grade students was obtained on both reading standards 2 and 3 (73 percent). The lowest percent of items correct for eighth grade students was obtained on for Reading Content Standard 1 (65 percent). Eighth grade students achieved an average of 1.9 points out of four possible points for the open-response reading items written to assess eighth grade Reading Content Standard 1. Asian eighth grade students (N=101) achieved the highest percent of correct responses for almost all reading standards. However, eighth grade white students (N=10368) obtained the highest percentage of correct items for Reading Content Standard 5. Eighth grade Asian students (N=101) earned by far the highest average score for the open-response reading items

administered to assess the Reading Content Standards. Eighth grade American Indian students (N=1397) achieved the lowest percent of items correct and the lowest average open-response item scores for all four reading standards assessed.

Tenth grade student performance on items administered to assess reading standards ranged from 70 to 73 percent correct. The highest percent of items correct for tenth grade students was obtained for Reading Content Standards 1 and 4 (73 percent) followed by Reading Content Standards 2 (72 percent), and 5 (70 percent). Overall, tenth grade students, averaged 2.0 out of four possible points for the open-response reading items written to assess the tenth grade Reading Content Standard 2. Asian (N=120) and White (N=10372) tenth grade students achieved the highest percent of correct responses across all reading standards. Asian tenth grade students (N=120) earned the highest average open-response item score (2.20). Of any of the subgroups assessed, tenth grade American Indian students (N=1177) achieved the lowest percent of reading items correct for each standard and the lowest average open-response score for Reading Content Standard 1.

Table 1: Percentage of Correct Student Reponses for Grades 4, 8 and 10

Reading Content Standard 1: Students construct meaning as they comprehend, interpret, and respond to what they read

Ethnicity	Number of items	N	Percent Items Correct
Grade 4	16		
American Indian		1252	59
Asian		106	72
Native Hawaiian or Other Pacific Islander		25	73
Hispanic		241	67
Black or African American		103	65
White		8945	74
State		10672	72
Grade 8	14		
American Indian		1397	52
Asian		101	69
Native Hawaiian or Other Pacific Islander		11	63
Hispanic		245	59
Black or African American		76	61
White		10368	68
State		12198	65
Grade 10	13		
American Indian		1177	56
Asian		120	79
Native Hawaiian or Other Pacific Islander		18	71
Hispanic		201	70
Black or African American		56	68
White		10372	76
State		11944	73

Table 2: *Percentage of Correct Student Reponses for Grades 4, 8 and 10.*

Reading Content Standard 2: Students apply a range of skills and strategies to read.

Ethnicity	Number of Items	N	Percent Items Correct
Grade 4	16		
American Indian		1252	55
Asian		106	67
Native Hawaiian or Other Pacific Islander		25	67
Hispanic		241	63
Black or African American		103	62
White		8945	70
State		10672	68
Grade 8	15		
American Indian		1397	57
Asian		101	79
Native Hawaiian or Other Pacific Islander		11	74
Hispanic		245	67
Black or African American		76	69
White		10368	75
State		12198	73
Grade 10	18		
American Indian		1177	54
Asian		120	72
Native Hawaiian or Other Pacific Islander		18	55
Hispanic		201	67
Black or African American		56	68
White		10372	73
State		11944	72

Table 3: *Percentage of Correct Student Reponses for Grades 4, 8 and 10.*

Reading Content Standard 4: Students select, read, and respond to print and nonprint materials for a variety of purposes.

Ethnicity	Number of Items	N	Percent Items Correct
Grade 4 (11 items)	11		
American Indian		1252	49
Asian		106	67
Native Hawaiian or Other Pacific Islander		25	64
Hispanic		241	57
Black or African American		103	55
White		8945	63
State		10672	61
	11		
Grade 8 (11 items)			
American Indian		1397	60
Asian		101	79
Native Hawaiian or Other Pacific Islander		11	69
Hispanic		245	68
Black or African American		76	69
White		10368	75
State		12198	73
	10		
Grade 10 (10 items)			
American Indian		1177	57
Asian		120	75
Black or African American		56	63
Hispanic		201	69
Black or African American		56	63
White		10372	75
State		11944	73

Table 4: *Percentage of Correct Student Reponses for Grades 4, 8 and 10.*

Reading Content Standard 5: Students gather, analyze, synthesize, and evaluate information from a variety of sources, and communicate their findings in ways appropriate for their purposes and audiences.

Ethnicity	Number of Items	N	Percent Items Correct
Grade 4	9		
American Indian		1252	54
Asian		106	68
Native Hawaiian or Other Pacific Islander		25	69
Hispanic		241	64
Black or African American		103	65
White		8945	71
State		10672	68
Grade 8	12		
American Indian		1397	46
Asian		101	58
Native Hawaiian or Other Pacific Islander		11	58
Hispanic		245	54
Black or African American		76	53
White		10368	61
State		12198	72
Grade 10	16		
American Indian		1177	54
Asian		120	72
Native Hawaiian or Other Pacific Islander		18	68
Hispanic		201	65
Black or African American		56	64
White		10372	72
State		11944	70

Table 5: *Average 4th and 8ᵗʰ grade Open-Response Scores Assessed on a Four Point Scale for Reading Content Standard 1.*

	Number of items	N	Group Average
Grade 4	2		
American Indian		1252	1.5
Asian		106	2.0
Native Hawaiian or Other Pacific Islander		25	1.8
Hispanic		241	1.7
Black or African American		103	1.8
White		8945	1.9
State		10672	1.9
Grade 8	2		
American Indian		1397	1.4
Asian		101	2.3
Native Hawaiian or Other Pacific Islander		11	1.9
Hispanic		245	1.8
Black or African American		76	1.8
White		10368	2.0
State		12198	1.9

Table 6: *Average 10th grade Open-Response Item Scores Assessment on a Four Point Scale for Reading Content Standard 2.*

	Number of items	N	Group Average
Grade 10	2		
American Indian		1177	1.50
Asian		120	2.20
Native Hawaiian or Other Pacific Islander		18	2.10
Hispanic		201	1.90
Black or African American		56	1.75
White		10372	2.10
State		11944	2.00

Mathematics Performance Disaggregated by Ethnicity

The percentages of mathematics items answered correctly by ethnicity and grade level for each mathematics standard is reported in Tables 7 through 13 and Appendices D, E and F. Average scores for the open-response mathematics items are reported in Tables 14 through 16. Fourth grade student performance for items administered to assess each of Montana's Mathematics Content Standards ranged from 56 to 79 percent. The highest percent of items correct for fourth grade students was obtained on Mathematics Content Standard 6, and the lowest percent of correct was found for Mathematics Content Standard 7. Analysis of open-response mathematics items found that fourth grade students achieved average score of 2.0 for four point items and .63 for one point open-response items. Asian (N=106) and White (N=8945) fourth grade students achieved the highest percent of correct responses across all Mathematics Content Standards as well as the highest average scores for mathematics open-response items (see Table 22). Of all subgroups assessed, fourth grade American Indian students (N=1252) achieved the lowest percent of mathematics items correct for each standard and the lowest average score for open-response mathematics items.

Eighth grade student performance for items administered to assess each of Montana's mathematics standards ranged from 36 to 51 percent correct. Eighth grade students achieved about 50 percent of items correct for Mathematics Content Standards 1, 2, 4, 6 and 7. The lowest percentage of items correct were obtained for Mathematics Content Standards 3 (44 percent) and 5 (36 percent). Eighth grade average student performance on open-response mathematics items written to assess Mathematics Content Standards 1, 2, 3 and 7 averaged 1.8 for open response items scored on a four point scale and .6 for one point open-response items. Asian (N=101) and White (N=10368) eighth grade students achieved the highest percent of items correct for each

Mathematics Content Standard and the highest average scores on mathematics open-response items. Eighth grade American Indian students (N=1397) achieved the lowest percent of mathematics items correct for each standard and the lowest average open-response score for all subgroups assessed.

Tenth grade student performance on items administered to assess tenth grade mathematics standards ranged from 31 to 56 percent correct. Tenth graders achieved 56 percent of items correct for Mathematics Content Standard 7 and answered only about 50 percent of items correctly for Mathematics Content Standards 2, 3, 5 and 6. The lowest percent of correct items were obtained for Mathematics Content Standards 1(31 percent) and 4 (43 percent). Asian tenth grade students (N=120) achieved the highest percent of correct responses of any group across all Mathematics Content Standards. Tenth grade students earned an average score of 1.8 for open-response four point mathematics items and .4 for one point open-response mathematics items. Asian tenth grade students (N=120) evidenced the highest average scores across all open-response mathematics items. Tenth grade American Indian students (N=1177) achieved the lowest percent of mathematics items correct for each standard and the lowest average open-response score of any subgroup. Interestingly, mathematics performance in terms of percent of items correct for each standard decreased from grade four to grade eight and then again from grade eight to grade ten.

Table 7: Percentage of Correct Student Reponses for Grades 4, 8 and 10.

Mathematics Content Standard 1: Students engage in the mathematical processes of problem solving and reasoning, estimation, communication, connections and applications, and using appropriate technology.

Ethnicity	Number of items	N	Percent Items Correct
Grade 4	7		
American Indian		1252	45
Asian		106	63
Native Hawaiian or Other Pacific Islander		25	54
Hispanic		241	52
Black or African American		103	52
White		8945	59
State		10672	57
Grade 8	7		
American Indian		1397	33
Asian		101	54
Native Hawaiian or Other Pacific Islander		11	51
Hispanic		245	39
Black or African American		76	35
White		10368	48
State		12198	46
Grade 10	9		
American Indian		1177	22
Asian		120	34
Native Hawaiian or Other Pacific Islander		18	30
Hispanic		201	28
Black or African American		56	23
White		10372	32
State		11944	31

Table 8: *Percentage of Correct Student Reponses for Grades 4, 8 and 10.*

Mathematics Content Standard 2: Students demonstrate understanding of and an ability to use numbers and operations.

Ethnicity	Number of items	N	Percent Items Correct
Grade 4 (7 items)	7		
American Indian		1252	55
Asian		106	67
Native Hawaiian or Other Pacific Islander		25	62
Hispanic		241	58
Black or African American		103	60
White		8945	65
State		10672	63
	8		
Grade 8 (8 items)			
American Indian		1397	32
Asian		101	56
Native Hawaiian or Other Pacific Islander		11	44
Hispanic		245	41
Black or African American		76	39
White		10368	50
State		12198	48
	6		
Grade 10 (6 items)			
American Indian		1177	37
Asian		120	48
Native Hawaiian or Other Pacific Islander		18	41
Hispanic		201	42
Black or African American		56	39
White		10372	47
State		11944	46

Table 9: *Percentage of Correct Student Reponses for Grades 4, 8 and 10.*

Mathematics Content Standard 3: Students use algebraic concepts, processes, and language to model and solve a variety of real-world and mathematical problems.

Ethnicity	Number of Items	N	Percent Items Correct
Grade 4	6		
American Indian		1252	57
Asian		106	69
Native Hawaiian or Other Pacific Islander		25	65
Hispanic		241	65
Black or African American		103	63
White		8945	83
State		10672	68
Grade 8	9		
American Indian		1397	31
Asian		101	57
Native Hawaiian or Other Pacific Islander		11	54
Hispanic		245	40
Black or African American		76	38
White		10368	46
State		12198	44
Grade 10	9		
American Indian		1177	40
Asian		120	59
Native Hawaiian or Other Pacific Islander		18	56
Hispanic		201	50
Black or African American		56	45
White		10372	55
State		11944	54

Table 10: *Percentage of Correct Student Reponses for Grades 4, 8 and 10.*

Mathematics Content Standard 4: Students demonstrate understanding of shape and an ability to use geometry.

Ethnicity	Number of Items	N	Percent Items Correct
Grade 4	11		
American Indian		1252	55
Asian		106	70
Native Hawaiian or Other Pacific Islander		25	62
Black or African American		103	60
Black or African American		103	60
White		8945	65
State		10672	64
Grade 8	11		
American Indian		1397	37
Asian		101	56
Native Hawaiian or Other Pacific Islander		11	50
Hispanic		245	45
Black or African American		76	43
White		10368	50
State		12198	49
Grade 10	10		
American Indian		1177	30
Asian		120	47
Native Hawaiian or Other Pacific Islander		18	36
Hispanic		201	36
Black or African American		56	34
White		10372	44
State		11944	43

Table 11: *Percentage of Correct Student Reponses for Grades 4, 8 and 10.*

Mathematics Content Standard 5: Students demonstrate understanding of measurable attributes and their ability to use measurement processes.

Ethnicity	Number of Items	N	Percent Items Correct
Grade 4	7		
American Indian		1252	48
Asian		106	62
Native Hawaiian or Other Pacific Islander		25	55
Hispanic		241	52
Black or African American		103	49
White		8945	58
State		10672	57
Grade 8	5		
American Indian		1397	29
Asian		101	42
Native Hawaiian or Other Pacific Islander		11	32
Hispanic		245	36
Black or African American		76	28
White		10368	37
State		12198	36
Grade 10	5		
American Indian		1177	34
Asian		120	52
Native Hawaiian or Other Pacific Islander		18	40
Hispanic		201	44
Black or African American		56	40
White		10372	53
State		11944	51

Table 12: *Percentage of Correct Student Reponses for Grades 4, 8 and 10.*

Mathematics Content Standard 6: The students demonstrate understanding of an ability to use data analysis, probability, and statistics.

Ethnicity	Number of Items	N	Percent Items Correct
Grade 4	9		
American Indian		1252	66
Asian		106	80
Native Hawaiian or Other Pacific Islander		25	76
Hispanic		241	76
Black or African American		103	77
White		8945	81
State		10672	79
Grade 8	8		
American Indian		1397	40
Asian		101	54
Native Hawaiian or Other Pacific Islander		11	46
Hispanic		245	45
Black or African American		76	46
White		10368	52
State		12198	50
Grade 10	13		
American Indian		1177	40
Asian		120	54
Native Hawaiian or Other Pacific Islander		18	46
Hispanic		201	47
Black or African American		56	45
White		10372	54
State		11944	53

Table 13: *Percentage of Correct Student Reponses for Grades 4, 8 and 10.*

Mathematics Content Standard 7: Students demonstrate understanding of and an ability to use patterns, relations and functions.

Ethnicity	Number of Items	N	Percent Items Correct
Grade 4	6		
American Indian		1252	43
Asian		106	59
Native Hawaiian or Other Pacific Islander		25	55
Hispanic		241	50
Black or African American		103	48
White		8945	58
State		10672	56
Grade 8	6		
American Indian		1397	40
Asian		101	60
Native Hawaiian or Other Pacific Islander		11	47
Hispanic		245	47
Black or African American		76	46
White		10368	53
State		12198	51
Grade 10	7		
American Indian		1177	37
Asian		120	63
Native Hawaiian or Other Pacific Islander		18	48
Hispanic		201	51
Black or African American		56	44
White		10372	58
State		11944	56

Table 14: *Average 4th grade Open-Response Item Scores for Mathematics Content Standards 2 and 6.*

Ethnicity	N	Group Average
Standard 2		
Three 1 point items		
American Indian	1252	.47
Asian	106	.68
Native Hawaiian or Other Pacific Islander	25	.58
Hispanic	241	.56
Black or African American	103	.56
White	8945	.65
State	10672	.63
One 4 point item		
American Indian	1252	1.4
Asian	106	2.3
Native Hawaiian or Other Pacific Islander	25	1.7
Hispanic	241	1.7
Black or African American	103	1.5
White	8945	2.1
State	10672	2.0
Standard 6		
One 4 point item		
American Indian	1397	1.4
Asian	101	2.3
Native Hawaiian or Other Pacific Islander	11	1.8
Hispanic	245	1.9
Black or African American	76	2.0
White	10368	2.2
State	12198	2.1

Table 15: *Average 8th grade Open-Response Item Scores for Mathematics Content Standards 1, 2, 3 and 7.*

Ethnicity	*N*	*Group Average*
Standard 1 (One 4 point item)		
American Indian	1397	1.2
Asian	101	2.0
Native Hawaiian or Other Pacific Islander	11	2.0
Hispanic	245	1.6
Black or African American	76	1.5
White	10368	2.0
State	12198	1.9
Standard 2 (Two 1 point items)		
American Indian	1397	.26
Asian	101	.58
Native Hawaiian or Other Pacific Islander	11	.59
Hispanic	245	.39
Black or African American	76	.37
White	10368	.51
State	12198	.50
Standard 3 (One 1 point item)		
American Indian	1397	.44
Asian	101	.84
Native Hawaiian or Other Pacific Islander	11	.82
Hispanic	245	.65
Black or African American	76	.63
White	10368	.75
State	12198	.70
Standard 7 (One 4 point item)		
American Indian	1397	.74
Asian	101	2.2
Native Hawaiian or Other Pacific Islander	11	2.0
Hispanic	245	1.3
Black or African American	76	.95
White	10368	1.8
State	12198	1.7

Table 16: *Average 10th grade Open-Response Item Scores for Mathematics Content Standards 2, 3, 4 and 7 Rated on a Four Point Scale.*

Ethnicity	N	Group Average
Standard 2 (One 1 point item)		
American Indian	1177	.12
Asian	120	.37
Native Hawaiian or Other Pacific Islander	18	.11
Hispanic	201	.21
Black or African American	56	.18
White	10372	.32
State	11944	.30
Standard 3 (Two 1 point items)		
American Indian	1177	.21
Asian	120	.52
Native Hawaiian or Other Pacific Islander	18	.42
Hispanic	201	.36
Black or African American	56	.36
White	10372	.47
State	11944	.45
Standard 4 (One 4 point item)		
American Indian	1177	.47
Asian	120	1.3
Native Hawaiian or Other Pacific Islander	18	.89
Hispanic	201	.74
Black or African American	56	.82
White	10372	1.1
State	11944	1.0
Standard 7 (One 4 point item)		
American Indian	1177	.53
Asian	120	1.2
Native Hawaiian or Other Pacific Islander	18	.94
Hispanic	201	.86
Black or African American	56	.93
White	10372	1.1
State	11944	1.1

Reading Performance Disaggregated By Free and Reduced Lunch Status

The percentages of reading items answered correctly by free and reduced lunch status for grades four, eight, and ten are reported in Tables 17 through 19 and Appendices G. Average scores for the open-response reading items are reported in Table 20. The performance of fourth grade students in the free and reduced lunch category on reading items administered to assess Reading Content Standards 1, 2, 4 and 5 ranged from 55 to 65 percent correct. Fourth grade free and reduced lunch students achieved the highest percent of items correct on Reading Content Standard 1 (65 percent) and the lowest percentage items correct on Reading Content Standard 4 (55 percent). Analysis of four point open-response reading items written to assess Reading Content Standard 1 found that free and reduced lunch status fourth grade students achieved an average score of 1.7 as compared to an average score of 1.9 for fourth grade students not classified as on free and reduced lunch status. In general, results reported in Tables 17 through 19 indicate that fourth grade free and reduced lunch status students scored below state achievement levels for all groups of reading items which were administered to assess each of the four Reading Content Standards.

The performance of eighth grade students classified in the free and reduced lunch category on reading items administered to assess the four Reading Content Standards ranged from 58 to 67 percent correct. Eighth grade free and reduced lunch students achieved the highest percent of items correct on Reading Content Standard 2 (76 percent) and the lowest percentage items correct on Reading Content Standard 1 (58 percent). Analysis of four point open-response reading items written to assess Reading Content Standard 1 found that free and reduced lunch status eighth grade students achieved an average score of 1.7 compared to eighth grade students not classified as on free and reduced lunch status. Results reported in Tables 17 through 19

indicate that tenth grade free and reduced lunch status students scored below state achievement levels for all groups of reading items which were administered to assess Reading Content Standards 1, 2, 4 and 5.

The performance of tenth grade students classified in the free and reduced lunch category on reading items administered to assess the four Reading Content Standards ranged from 62 to 66 percent correct. Tenth grade free and reduced lunch students achieved the highest percent of items correct on Reading Content Standards 1 (66 percent) and 4 (66 percent) and earned the lowest percentage items correct on Reading Content Standard 5 (62 percent). Analysis of four point open-response reading items written to assess Reading Content Standard 1 found that free and reduced lunch status tenth grade students achieved an average score of 1.7 as compared to an average score of 1.9 for tenth grade students not classified as on free and reduced lunch status. Results reported in Tables 17 through 19 reveal that tenth grade free and reduced lunch status students scored below state achievement levels for all groups of reading items which were administered to assess Reading Content Standards 1, 2, 4 and 5.

Table 17: *Grade 4 Percentage of Correct Student Responses by Free and Reduced Lunch Status for All Items for Each Reading Content Standard.*

	Number of Items	Free and Reduced (F/RL)	N	Percent Items Correct
Standard 1	16			
		Not on F/RL	6708	76
		On F/RL	3964	65
		State	10672	72
Standard 2	16			
		Not on F/RL	6708	72
		On F/RL	3964	61
		State	10672	68
Standard 4	11			
		Not on F/RL	6708	65
		On F/RL	3964	55
		State	10672	61
Standard 5	9			
		Not on F/RL	6708	72
		On F/RL	3964	61
		State	10672	68

Table 18: *Grade 8 Percentage of Correct Student Responses by Free and Reduced Lunch Status for All Items for Each Reading Content Standard.*

	Number of Items	Free and Reduced (F/RL)	N	Percent Items Correct
Standard 1	14			
		Not on F/RL	8227	68
		On F/RL	3971	58
		State	12198	65
Standard 2	15			
		Not on F/RL	8227	70
		On F/RL	3971	67
		State	12198	73
Standard 4	11			
		Not on F/RL	8227	76
		On F/RL	3971	67
		State	12198	73
Standard 5	12			
		Not on F/RL	8227	76
		On F/RL	3971	67
		State	12198	72

Table 19: *Grade 10 Percentage of Correct Student Responses by Free and Reduced Lunch Status for All Items for Each Reading Content Standards Rated on a Four Point Scale.*

	Number of Items	Free and Reduced (F/RL)	N	Percent Items Correct
Standard 1	13			
		Not on F/RL	9147	75
		On F/RL	2797	66
		State	1194	73
Standard 2	18			
		Not on F/RL	9147	74
		On F/RL	2797	64
		State	1194	72
Standard 4	10			
		Not on F/RL	9147	75
		On F/RL	2797	66
		State	1194	73
Standard 5	16			
		Not on F/RL	9147	72
		On F/RL	2797	62
		State	1194	70

Table 20: *Average Open-Response Item Scores by Free and Reduced Lunch Status for Reading Content Standards Rated on a Four Point Scale.*

	Number of items	Free and Reduced (F/RL)	N	Group Average
Standard 1	2			
4th Grade				
		Not on F/RL	9147	1.9
		On F/RL	2797	1.7
		State	1194	1.9
Standard 1	2			
8th Grade				
		Not on F/RL	9147	2.1
		On F/RL	2797	1.7
		State	1194	1.9
Standard 2	2			
10th Grade				
		Not on F/RL	9147	2.1
		On F/RL	2797	1.7
		State	1194	2.0

Mathematics Performance Disaggregated by Free and Reduced Lunch Status

The percentages of mathematics items answered correctly by free and reduced lunch status for grades four, eight, and ten are reported in Tables 21 through 23 and Appendix H. Average scores for the open-response mathematics items are reported in Tables 24 through 26. The performance of fourth grade students classified in the free and reduced lunch category on mathematics items administered to assess the Mathematics Content Standards ranged from 49 to 73 percent correct. Fourth grade students in the free and reduced lunch category achieved the highest percent of items correct on Mathematics Content Standard 6 (73 percent) and the lowest percent of items correct on Mathematics Content Standard 7 (49 percent). Analysis of four point open-response mathematics items indicates that fourth grade free and reduced lunch students achieved an average score of 1.7 as compared to an average score of 2.3 for fourth graders not classified as on free and reduced lunch status. Likewise, free and reduced lunch students averaged .6 for one point open-response items as compared to .7 for fourth graders not classified as on free and reduced lunch status. Overall, results reported in Tables 21 and 24 indicate that fourth grade free and reduced lunch status students scored below state achievement levels for groups of mathematics items administered to assess the seven Mathematics Content Standards.

The performance of eighth grade students classified in the free and reduced lunch category on groups of mathematics items administered to assess the seven Mathematics Content Standards ranged from 32 to 45 percent correct. Eighth grade students identified in the free and reduced lunch category achieved the highest percent of items correct on Mathematics Content Standard 7 (45 percent) and the lowest percent of items correct on Mathematics Content

Standard 5 (32 percent). The percent of items correct fell below 40 percent for Mathematics

Content Standards 1, 2, 3, 4 and 6. Analysis of four point open-response mathematics items

indicates that eighth grade free and reduced lunch students achieved an average score of 1.4 as

compared to an average score of 2 for eighth graders not classified as on free and reduced lunch

status. Likewise, free and reduced lunch eight grade students averaged .5 for one point open-

response items as compared to .7 for fourth graders not classified as on free and reduced lunch

status. Results reported in Tables 22 and 25 indicate that eighth grade free and reduced lunch

status students scored below state achievement levels for all groups of mathematics items

comprising the seven Mathematics Content Standards that were assessed.

The performance of tenth grade students classified in the free and reduced lunch category

on groups of mathematics items administered to assess the seven Mathematics Content Standards

ranged from 36 to 47 percent correct. Tenth grade free and reduced lunch students achieved the

highest percent of items correct on Mathematics Content Standard 7 (47 percent) and the lowest

percentage items correct on Mathematics Content Standard 1 (26 percent). The performance for

this group of students on Mathematics Content Standards 2, 3, 4, 5 and 6 was found to be well-

below 50 percent. Analysis of four point open-response mathematics items indicates that tenth

grade free and reduced lunch students achieved an average score of .8 for one point items as

compared to an average score of 1.1 for students not on free and reduced lunch status. Likewise,

for one point open-response items, tenth grade free and reduced lunch students earned an average

score of .4 as compared to an average score of .4 for students not classified as free and reduced

lunch status. Results reported in Tables 23 and 26 indicate that tenth grade free and reduced

lunch status students scored below state achievement levels for all groups of items comprising

the seven Mathematics Content Standards that were assessed.

Table 21: *Grade 4 Percentage of Correct Student Reponses by Free and Reduced Lunch Status for Each Mathematics Content Standard.*

	Number of Items	*Free and Reduced (F/RL)*	*N*	*Percent Items Correct*
Standard 1	7			
		Not on F/RL	6708	60
		On F/RL	3964	51
		State	10672	57
Standard 2	7			
		Not on F/RL	6708	67
		On F/RL	3964	58
		State	10672	63
Standard 3	6			
		Not on F/RL	6708	70
		On F/RL	3964	63
		State	10672	68
Standard 4	11			
		Not on F/RL	6708	66
		On F/RL	3964	60
		State	10672	64
Standard 5	7			
		Not on F/RL	6708	59
		On F/RL	3964	52
		State	10672	57
Standard 6	9			
		Not on F/RL	6708	82
		On F/RL	3964	73
		State	10672	79
Standard 7	6			
		Not on F/RL	6708	60
		On F/RL	3964	49
		State	10672	56

Table 22: *Grade 8 Percentage of Correct Student Reponses by Free and Reduced Lunch Status for Each Mathematics Content Standard.*

	Number of Items	*Free and Reduced (F/RL)*	*N*	*Percent Items Correct*
Standard 1	7			
		Not on F/RL	8227	49
		On F/RL	3971	38
		State	12198	46
Standard 2	8			
		Not on F/RL	8227	52
		On F/RL	3971	39
		State	12198	48
Standard 3	9			
		Not on F/RL	8227	47
		On F/RL	3971	37
		State	12198	44
Standard 4	11			
		Not on F/RL	8227	52
		On F/RL	3971	43
		State	12198	49
Standard 5	5			
		Not on F/RL	8227	39
		On F/RL	3971	32
		State	12198	36
Standard 6	8			
		Not on F/RL	8227	53
		On F/RL	3971	45
		State	12198	50
Standard 7	6			
		Not on F/RL	8227	54
		On F/RL	3971	45
		State	12198	51

Table 23: *Grade 10 Percentage of Correct Student Reponses by Free and Reduced Lunch Status for Each Mathematics Content Standard.*

		Free and Reduced (F/RL)	*N*	*Percent Items Correct*
Standard 1	9			
		Not on F/RL	9147	32
		On F/RL	2797	26
		State	1194	31
Standard 2	6			
		Not on F/RL	9147	47
		On F/RL	2797	41
		State	1194	46
Standard 3	9			
		Not on F/RL	9147	56
		On F/RL	2797	47
		State	1194	54
Standard 4	10			
		Not on F/RL	9147	45
		On F/RL	2797	36
		State	1194	43
Standard 5	5			
		Not on F/RL	9147	53
		On F/RL	2797	42
		State	1194	51
Standard 6	13			
		Not on F/RL	9147	54
		On F/RL	2797	46
		State	1194	53
Standard 7	7			
		Not on F/RL	9147	59
		On F/RL	2797	47
		State	1194	56

Table 24: *Average 4th grade Open-Response Item Scores by Free and Reduced Lunch Status for Mathematics Content Standards 2 and 6.*

	Free and Reduced (F/RL)	N	Group Average
Standard 2			
Three 1 point items			
	Not on F/RL	6708	.67
	On F/RL	3964	.56
	State	10672	.63
One 4 point item			
	Not on F/RL	6708	2.3
	On F/RL	3964	1.8
	State	10672	2.1
Standard 6			
One 4 point item			
	Not on F/RL	6708	2.2
	On F/RL	3964	1.6
	State	10672	2.0

Table 25: *Average 8th[th] grade Open-Response Item Scores by Free and Reduced Lunch Status for Mathematics Content Standards 1, 2, 3 and 7.*

	Free and Reduced (F/RL)	*N*	*Group Average*
Standard 1 (One 4 point item)			
	Not on F/RL	8227	2.1
	On F/RL	3971	1.6
	State	12198	1.9
Standard 2 (Two 1 point items)			
	Not on F/RL	8227	.54
	On F/RL	3971	.37
	State	12198	.50
Standard 3 (One 1 point item)			
	Not on F/RL	8227	.77
	On F/RL	3971	.59
	State	12198	.70
Standard 7 (One 4 point item)	Not on F/RL	8227	1.9
	On F/RL	3971	1.2
	State	12198	1.7

Table 26: *Average 10th[th] grade Open-Response Item Scores by Free and Reduced Lunch Status for Mathematics Content Standards 2, 3 and 7.*

	Free and Reduced (F/RL)	N	Group Average
Standard 2 (One 1 point item)			
	Not on F/RL	9147	.33
	On F/RL	2797	.21
	State	1194	.30
Standard 3 (Two 1 point items)			
	Not on F/RL	9147	.48
	On F/RL	2797	.32
	State	1194	.45
Standard 4 (One 4 point item)	Not on F/RL	9147	1.1
	On F/RL	2797	.72
	State	1194	1.0
Standard 7 (One 4 point item)			
	Not on F/RL	9147	1.2
	On F/RL	2797	.80
	State	1194	1.1

Reading Performance Disaggregated by Limited English Proficient/English Language Learner Status

The percentages of reading items answered correctly by Limited English Proficient/English Language Learner (LEP/ELL) for grades four, eight, and ten are reported in Tables 27 through 29 and Appendix I. Average scores for the open-response reading items are reported in Table 30. The performance of fourth grade students classified as LEP/ELL on reading items administered to assess Reading Content Standards 1, 2, 4 and 5 ranged from 41 to 50 percent correct. Fourth grade students identified in the LEP/ELL category achieved the highest percent of items correct on Reading Content Standard 1 (50 percent) and the lowest percentage items correct on reading standard 4 (41 percent). Analysis of open-response reading items written to assess reading standard 1 indicated that LEP/ELL fourth grade students achieved an average score of 1.3 as compared an average score of 1.9 for fourth grade students not classified as LEP/ELL. Results reported in tables 27 and 30 indicate that fourth grade LEP/ELL students scored below state achievement levels for groups of reading items comprising Reading Content Standards 1, 2, 4 and 5.

The performance of eighth grade students classified as LEP/ELL on reading items administered to assess Reading Content Standards 1, 2, 4 and 5 ranged from 38 to 51 percent correct. Eighth grade students identified as LEP/ELL achieved the highest percent of items correct on Reading Content Standard 3 (51 percent) and the lowest percentage items correct on Reading Content Standard 5 (38 percent). Analysis of open-response reading items written to assess Reading Content Standard 1 indicates that LEP/ELL eighth grade students achieved an average score of 1.1 as compared an average score of 1.9 for eighth grade students not classified as LEP/ELL. Results reported in Tables 28 and 30 indicate that eighth grade LEP/ELL students

scored below state achievement levels for groups of reading items comprising the four Reading Content Standards that were assessed.

The performance of tenth grade students classified as LEP/ELL on reading items administered to assess the four reading standards ranged from 46 to 51 percent correct. Tenth grade students identified in the LEP/ELL category achieved the highest percent of items correct on Reading Content Standard 3 (51 percent) and earned the lowest percent-of items correct on Reading Content Standard 2 (46 percent). Performance for this group of students on groups of reading items administered to assess reading standards 1 and 5 fell below 50 percent correct. Analysis of open-response reading items written to assess Reading Content Standard 1 indicate that LEP/ELL tenth grade students achieved an average score of 1.3 as to an average score of 2.0 for tenth grade students not classified as LEP/ELL. Results reported in Tables 29 and 30 indicate that tenth grade LEP/ELL students scored below the state achievement levels on groups of reading items comprising the four reading content standards that were assessed.

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Table 27: *Grade 4 Percentage of Correct Student Reponses by LEP/ELL for Each of the Reading Content Standards Assessed.*

	Number of Items	LEP/ELL	N	Percent Items Correct
Standard 1	16			
		Not LEP/ELL	10274	73
		LEP/ELL	398	50
		State	10672	72
Standard 2	16			
		Not LEP/ELL	10274	69
		LEP/ELL	398	45
		State	10672	68
Standard 4	11			
		Not LEP/ELL	10274	62
		LEP/ELL	398	41
		State	10672	61
Standard 5	9			
		Not LEP/ELL	10274	69
		LEP/ELL	398	46
		State	10672	68

Table 28: *Grade 8 Percentage of Correct Student Reponses by LEP/EEL for Each Reading Content Standard.*

	Number of Items	LEP/ELL	N	Percent Items Correct
Standard 1	14			
		Not LEP/ELL	11796	66
		LEP/ELL	402	44
		State	12198	65
Standard 2	15			
		Not LEP/ELL	11796	74
		LEP/ELL	402	49
		State	12198	73
Standard 4	11			
		Not LEP/ELL	11796	74
		LEP/ELL	402	51
		State	12198	73
Standard 5	12			
		Not LEP/ELL	11796	60
		LEP/ELL	402	38
		State	12198	59

Table 29: *Grade 10 Percentage of Correct Student Reponses by LEP/EEL for Each Reading Content Standard.*

	Number of Items	*LEP/ELL*	*N*	*Percent Items Correct*
Standard 1	13			
		Not LEP/ELL	11575	74
		LEP/ELL	369	48
		State	11944	73
Standard 2	18			
		Not LEP/ELL	11575	72
		LEP/ELL	369	46
		State	11944	72
Standard 4	10			
		Not LEP/ELL	11575	74
		LEP/ELL	369	51
		State	11944	73
Standard 5	16			
		Not LEP/ELL	11575	70
		LEP/ELL	369	47
		State	11944	70

Table 30: *Average Open-Response Item Scores by LEP/ELL for Reading Content Standards 1 and 2 Rated on a Four Point Scale.*

	LEP/ELL	*N*	*Group Average*
Standard 1			
4th Grade			
	Not LEP/ELL	10274	1.9
	LEP/ELL	398	1.3
	State	10672	1.9
Standard 1			
8th Grade			
	Not LEP/ELL	11796	2.0
	LEP/ELL	402	1.1
	State	12198	1.9
Standard 2			
10th Grade			
	Not LEP/ELL	11575	2.0
	LEP/ELL	369	1.3
	State	11944	2.0

Mathematics Performance Disaggregated by Limited English Proficient /English

Language Learner Status

The percentage of mathematics items answered correctly for each Mathematics Content Standard by LEP/ELL for grades four, eight, and ten are reported in Tables 31 through 33 and Appendix J. Average scores for the open-response mathematics items are reported in Tables 34-36. The performance of fourth grade students classified as LEP/ELL on mathematics items administered to assess the seven Mathematics Content Standards ranged from 39 to 60 percent correct. Fourth grade students identified in the LEP/ELL category achieved the highest percent of items correct on Mathematics Content Standard 6 (60 percent) and the lowest percentage items correct on Mathematics Content Standard 7 (39 percent). Analysis of four point open-response mathematics items indicates that fourth grade LEP/ELL students achieved an average score of 1.1 as compared to an average score of 2.1 for fourth grade students not classified as LEP/ELL. Analysis of one point open-response items found that fourth grade LEP/ELL students earned average scores of .43 as compared to an average score of .63 for fourth grade students not classified as LEP/ELL. Results reported in tables 31 and 34 indicate that fourth grade LEP/ELL students scored below state achievement levels on groups of mathematics items comprising the seven Mathematics Content Standards that were assessed.

The performance of eighth grade students classified as LEP/ELL on mathematics items administered to assess the seven Mathematics Content Standards ranged from 26 to 36 percent correct. Eighth grade LEP/ELL students achieved the highest percent of items correct on Mathematics Content Standard 6 (36 percent) and 7 (36 percent) and the lowest percentage items correct on Mathematics Content Standard 5 (26 percent). However, it is worth noting that LEP/ELL student performance was found to fall well-below 50 percent correct on Mathematics

Content Standards 1, 2, 3, 4 and 5. Analysis of four point open-response mathematics items indicates that eighth grade LEP/ELL students achieved an average score of .7 as compared to an average score of 1.8 for eighth grade students not classified as LEP/ELL. Analysis of one point open-response items found that eighth LEP/ELL students earned average scores of .25 as compared to an average score of .61 for eighth students not classified as LEP/ELL. Results reported in Tables 32 and 35 indicate that eighth grade LEP/ELL students scored below state achievement levels for groups of mathematics items comprising the seven Mathematics Content Standards that were assessed.

The performance of tenth grade students classified as LEP/ELL on mathematics items administered to assess the seven Mathematics Content Standards ranged from 22 to 37 percent correct. Tenth grade LEP/ELL students achieved the highest percent of items correct on Mathematics Content Standard 7 (37 percent) and the lowest percentage items correct on Mathematics Content Standard 1(22 percent). The performance on item groups comprising Mathematics Content Standards 2, 3, 4, 5 and 6 for this group of students was found to fall well-below 50 percent. Analysis of four point open-response mathematics items indicates that tenth grade LEP/ELL students achieved an average score of .4 as compared to an average score of 1.1 for tenth grade students not classified as LEP/ELL. Analysis of one point open-response items found that tenth grade LEP/ELL students earned average scores of .24 as compared to an average score of .4 for tenth grade students not classified as LEP/ELL. Results reported in Tables 33 and 36 indicate that tenth grade LEP/ELL students scored below state achievement levels for groups of mathematics items comprising the seven Mathematics Content Standards.

Table 31: *Grade Four Percentage of Correct Student Reponses by LEP/ELL for Each Mathematics Content Standard.*

	Number of Items	*LEP/ELL*	*N*	*Percent Items Correct*
Standard 1	7			
		Not LEP/ELL	10274	57
		LEP/ELL	398	42
		State	10672	57
Standard 2	7			
		Not LEP/ELL	10274	64
		LEP/ELL	398	45
		State	10672	63
Standard 3	6			
		Not LEP/ELL	10274	68
		LEP/ELL	398	53
		State	10672	68
Standard 4	11			
		Not LEP/ELL	10274	64
		LEP/ELL	398	53
		State	10672	64
Standard 5	7			
		Not LEP/ELL	10274	57
		LEP/ELL	398	47
		State	10672	57
Standard 6	9			
		Not LEP/ELL	10274	79
		LEP/ELL	398	60
		State	10672	79
Standard 7	6			
		Not LEP/ELL	10274	56
		LEP/ELL	398	39
		State	10672	56

Table 32: *Grade 8 Percentage of Correct Student Reponses by LEP/ELL for Each Mathematics Content Standard.*

	Number of Items	*LEP/ELL*	*N*	*Percent Items Correct*
Standard 1	7			
		Not LEP/ELL	11796	46
		LEP/ELL	402	27
		State	12198	46
Standard 2	8			
		Not LEP/ELL	11796	48
		LEP/ELL	402	27
		State	12198	48
Standard 3	9			
		Not LEP/ELL	11796	45
		LEP/ELL	402	27
		State	12198	44
Standard 4	11			
		Not LEP/ELL	11796	49
		LEP/ELL	402	33
		State	12198	49
Standard 5	5			
		Not LEP/ELL	11796	37
		LEP/ELL	402	26
		State	12198	36
Standard 6	8			
		Not LEP/ELL	11796	50
		LEP/ELL	402	36
		State	12198	50
Standard 7	6			
		Not LEP/ELL	11796	52
		LEP/ELL	402	36
		State	12198	51

Table 33: *Grade 10 Percentage of Correct Student Reponses by LEP/ELL for Each Mathematics Content Standard.*

	Number of Items	LEP/ELL	N	Percent Items Correct
Standard 1	9			
		Not LEP/ELL	11575	31
		LEP/ELL	369	22
		State	11944	31
Standard 2	6			
		Not LEP/ELL	11575	46
		LEP/ELL	369	35
		State	11944	46
Standard 3	9			
		Not LEP/ELL	11575	54
		LEP/ELL	369	37
		State	11944	54
Standard 4	10			
		Not LEP/ELL	11575	43
		LEP/ELL	369	27
		State	11944	43
Standard 5	5			
		Not LEP/ELL	11575	51
		LEP/ELL	369	32
		State	11944	51
Standard 6	13			
		Not LEP/ELL	11575	53
		LEP/ELL	369	36
		State	11944	53
Standard 7	7			
		Not LEP/ELL	11575	57
		LEP/ELL	369	33
		State	11944	56

Table 34: *Average 4ᵗʰ grade Open-Response Item Scores by LEP/ELL for Mathematics Content Standards 2 and 6.*

	LEP/ELL	N	Group Average
Standard 2			
Three 1 point items			
	Not LEP/ELL	10274	.63
	LEP/ELL	398	.43
	State	10672	.63
One 4 point item			
	Not LEP/ELL	10274	2.0
	LEP/ELL	398	1.2
	State	10672	2.0
Standard 6			
One 4 point item			
	Not LEP/ELL	10274	2.2
	LEP/ELL	398	1.0
	State	10672	2.1

Table 35: *Average 8th^th grade Open-Response Item Scores by LEP/ELL for Mathematics Content Standards 1, 2, 3 and 7.*

Ethnicity	*LEP/ELL*	*N*	*Group Average*
Standard 1 (One 4 point item)			
	Not LEP/ELL	11796	1.9
	LEP/ELL	402	.86
	State	12198	1.9
Standard 2 (Two 1 point items)			
	Not LEP/ELL	11796	.49
	LEP/ELL	402	.16
	State	12198	.50
Standard 3 (One 1 point item)			
	Not LEP/ELL	11796	.72
	LEP/ELL	402	.33
	State	12198	.70
Standard 7 (One 4 point item)	Not LEP/ELL	11796	1.7
	LEP/ELL	402	.49
	State	12198	1.7

Table 36: *Average 10th[th] grade Open-Response Item Scores by LEP/ELL for Mathematics Content Standards 2, 3, 4 and 7.*

Ethnicity	LEP/ELL	N	Group Average
Standard 2 (One 1 point item)			
	Not LEP/ELL	11575	.31
	LEP/ELL	369	ND
	State	11944	.30
Standard 3 (Two 1 point items)			
	Not LEP/ELL	11575	.46
	LEP/ELL	369	.24
	State	11944	.45
Standard 4 (One 4 point item)			
	Not LEP/ELL	11575	1.1
	LEP/ELL	369	.37
	State	11944	1.0
Standard 7 (One 4 point item)			
	Not LEP/ELL	11575	1.1
	LEP/ELL	369	.38
	State	11944	1.1

Note. ND = No Data

Reading Performance Disaggregated by Special Education

The percentages of reading items answered correctly by Special Education Students for grades four, eight, and ten are reported in Tables 47 through 50 and Appendix K. Special Education students are considered those students who have been placed on an individualized education plan (IEP). Average scores for the open-response reading items are reported in Table 50. The performance of fourth grade special education students on reading items administered to assess Reading Content Standards 1, 2, 4 and 5 ranged from 47 to 55 percent correct. Fourth grade special education students achieved the highest percent of items correct on Reading Content Standard 1 (50 percent) and the lowest percentage items correct on reading standard 4 (47 percent). Analysis of four point open-response reading items written to assess reading standard 1 that indicated that fourth grade Special Education students achieved an average score of 1.4 as compared to an average score of 1.9 for fourth grade students not placed in Special Education. Results reported in tables 47 and 50 indicate that fourth Special Education students scored below state achievement levels across reading items comprising Reading Content Standards 1, 2, 4 and 5.

The performance of eighth grade Special Education students on reading items administered to assess Reading Content Standards 1, 2, 4 and 5 ranged from 41 to 54 percent correct. Eighth grade Special Education Students achieved the highest percent of items correct on Reading Content Standard 4 (54 percent) and the lowest percentage items correct on Reading Content Standard 5 (41 percent). Analysis of four point open-response reading items written to assess Reading Content Standard 1 eighth grade Special Education Students achieved an average score of 1.2 as compared to an average score of 2.0 for eighth grade students not on placed in special education. Results reported in Tables 48 and 50 indicate that eight grade Special

Education students scored below state achievement levels for groups of reading items comprising the four Reading Content Standards that were assessed.

The performance of tenth grade special education students on reading items administered to assess the four reading standards ranged from 48 to 51 percent correct. Tenth grade students Special Education students achieved the highest percent of items correct on Reading Content Standard 4 (51 percent) and earned the lowest percent of items correct on Reading Content Standards 2 and 5 (47 percent). Analysis of four point open-response reading items written to assess reading standard 1 indicated that tenth grade Special Education students achieved an average score of 1.2 as compared an average score of 2.1 for tenth grade student not receiving special education services. Results reported in Tables 29 and 30 indicate that tenth grade LEP/ELL students scored below the state achievement levels on groups of reading items comprising the four reading content standards that were assessed.

Table 47: *Grade 4 Percentage of Correct Student Reponses by Special Education Status for the Four Reading Content Standards Assessed.*

	Number of Items	Special Education Status	N	Percent Items Correct
Standard 1	16			
		No IEP	9391	74
		IEP	1281	55
		State	10672	72
Standard 2	16			
		No IEP	9391	71
		IEP	1281	49
		State	10672	68
Standard 4	11			
		No IEP	9391	63
		IEP	1281	47
		State	10672	61
Standard 5	9			
		No IEP	9391	71
		IEP	1281	49
		State	10672	68

Table 48: *Grade 8 Percentage of Correct Student Reponses by Special Education Status for Each Reading Content Standard.*

	Number of Items	Special Education Status	N	Percent Items Correct
Standard 1	14			
		No IEP	10823	68
		IEP	1375	46
		State	12198	65
Standard 2	15			
		No IEP	10823	76
		IEP	1375	51
		State	12198	73
Standard 4	11			
		No IEP	10823	76
		IEP	1375	54
		State	12198	73
Standard 5	12			
		No IEP	10823	61
		IEP	1375	41
		State	12198	59

Table 49: *Grade 10 Percentage of Correct Student Reponses by Special Education Status for Each Reading Content Standard.*

	Number of Items	Special Education Status	N	Percent Items Correct
Standard 1	13			
		No IEP	10813	75
		IEP	1131	49
		State	11944	73
Standard 2	18			
		No IEP	10813	74
		IEP	1131	48
		State	11944	72
Standard 4	10			
		No IEP	10813	75
		IEP	1131	51
		State	11944	73
Standard 5	16			
		No IEP	10813	72
		IEP	1131	48
		State	11944	70

Table 50: *Average Open-Response Item Scores by Special Education Status for Reading Content Standards Assessed on a Four Point Scale.*

	Number of Items	Special Education Status	N	Group Average
Standard 1	2			
4th Grade		No IEP	9391	1.9
		IEP	1281	1.4
		State	10672	1.9
Standard 1	2			
8th Grade				
		No IEP	10823	2.0
		IEP	1375	1.2
		State	12198	2.0
Standard 2	2			
10th Grade				
		No IEP	10813	2.1
		IEP	1131	1.2
		State	11944	2.0

Mathematics Performance Disaggregated by Special Education Status

The percentage of mathematics items answered correctly for each Mathematics Content Standard by Special Education status for grades four, eight, and ten is reported in Tables 51 through 56 and Appendix L. Special Education students are considered those students who have been placed on an individualized education plan (IEP). Average scores for the open-response mathematics items are reported in Tables 54 through 56. The performance of fourth grade Special Education students on mathematics items administered to assess the seven Mathematics Content Standards ranged from 41 to 66 percent correct. Fourth grade Special Education students achieved the highest percent of items correct on Mathematics Content Standard 6 (66 percent) and the lowest percentage items correct on Mathematics Content Standard 7 (41 percent). Analysis of four point open-response mathematics items indicates that fourth grade special education students earned an average score of 1.4 points as compared to an average score of 2.2 for fourth grade students not receiving special education services. Results from the analysis of one point responses indicates that fourth grade special education students achieved an average score of .40 as compared to an average score of .7 for fourth grade students not receiving special education services. Results reported in tables 51 and 54 indicate that fourth grade special education students scored below state achievement levels on groups of mathematics items comprising the seven Mathematics Content Standards that were assessed.

The performance of eighth grade Special Education students on mathematics items administered to assess the seven Mathematics Content Standards ranged from 25 to 37 percent correct. Eighth grade students on IEPs achieved the highest percent of items correct on Mathematics Content Standard 6 (37 percent) and the lowest percentage items correct on Mathematics Content Standard 5 (25 percent). Analysis of four point open-response mathematics

items indicates that eighth grade special education students earned an average score of .8 points as compared to an average score of 1.9 for eighth students not receiving special education services. Results from the analysis of one point responses indicates that eighth grade special education students achieved an average score of .3 as compared to an average score of .6 for eighth grade students not receiving special education services. Results reported in Tables 52 and 55 indicate that eighth grade Special Education students scored below state achievement levels for groups of mathematics items comprising the seven Mathematics Content Standards that were assessed.

The performance of tenth Special Education students on mathematics items administered to assess the seven Mathematics Content Standards ranged from 22 to 36 percent correct. Tenth grade students on IEPs achieved the highest percent of items correct on Mathematics Content Standard 6 (36 percent) and the lowest percentage items correct on Mathematics Content Standard 1 (22 percent). Analysis of four point open-response mathematics items indicates that tenth grade special education students earned an average score of .8 points as compared to an average score of 1.9 for tenth grade students not receiving special education services. Results from the analysis of one point responses indicates that tenth grade special education students achieved an average score of .4 as compared to an average score of .4 for tenth grade students not receiving special education services. Results reported in Tables 53 and 56 indicate that tenth grade Special Education students scored below state achievement levels for groups of mathematics items comprising the seven Mathematics Content Standards.

Table 51: *Grade 4 Percentage of Correct Student Reponses by Special Education Status for*

Each Mathematics Content Standard.

	Number of Items	Special Education Status	N	Percent Items Correct
Standard 1	7			
		No IEP	9391	59
		IEP	1281	43
		State	10672	57
Standard 2	7			
		No IEP	9391	65
		IEP	1281	56
		State	10672	63
Standard 3	6			
		No IEP	9391	69
		IEP	1281	53
		State	10672	68
Standard 4	11			
		No IEP	9391	65
		IEP	1281	54
		State	10672	64
Standard 5	7	No IEP	9391	58
		IEP	1281	46
		State	10672	57
Standard 6	9	No IEP	9391	81
		IEP	1281	66
		State	10672	79
Standard 7	6	No IEP	9391	58
		IEP	1281	41
		State	10672	56

Table 52: *Grade 8 Percentage of Correct Student Reponses by Special Education Status or Each Mathematics Content Standards.*

	Number of Items	Special Education Status	N	Percent Items Correct
Standard 1	7			
		No IEP	10823	47
		IEP	1375	30
		State	12198	46
Standard 2	8			
		No IEP	10823	50
		IEP	1375	28
		State	12198	48
Standard 3	9			
		No IEP	10823	46
		IEP	1375	28
		State	12198	44
Standard 4	11			
		No IEP	10823	51
		IEP	1375	35
		State	12198	49
Standard 5	5	No IEP	10823	38
		IEP	1375	25
		State	12198	36
Standard 6	8	No IEP	10823	52
		IEP	1375	37
		State	12198	50
Standard 7	6	No IEP	10823	53
		IEP	1375	36
		State	12198	51

Table 53: *Grade 10 Percentage of Correct Student Reponses by Special Education Status for Each Mathematics Content Standards.*

	Number of Items	Special Education Status	N	Percent Items Correct
Standard 1	9			
		No IEP	10813	31
		IEP	1131	22
		State	11944	31
Standard 2	6			
		No IEP	10813	47
		IEP	1131	34
		State	11944	46
Standard 3	9			
		No IEP	10813	55
		IEP	1131	36
		State	11944	54
Standard 4	10			
		No IEP	10813	44
		IEP	1131	27
		State	11944	43
		No IEP	10813	53
Standard 5	5	IEP	1131	33
		State	11944	51
		No IEP	10813	54
Standard 6	13	IEP	1131	38
		State	11944	53
		No IEP	10813	59
Standard 7	7	IEP	1131	33
		State	11944	56

Table 54: *Average 4th grade Open-Response Item Scores by Special Education Status for Mathematics Content Standards 2 and 6.*

	Special Education Status	*N*	*Group Average*
Standard 2			
Three 1 point items			
	No IEP	9391	.66
	IEP	1281	.41
	State	10672	.63
One 4 point item			
	No IEP	9391	2.1
	IEP	1281	1.3
	State	10672	2.0
Standard 6			
	No IEP	9391	2.2
One 4 point item	IEP	1281	1.4
	State	10672	2.1

Table 55: *Average 8thth grade Open-Response Item Scores by Special Education Status for Mathematics Content Standards 1, 2, 3 and 7.*

Ethnicity	*Special Education Status*	*N*	*Group Average*
Standard 1 (One 4 point item)			
	No IEP	10823	2.0
	IEP	1375	1.1
	State	12198	1.9
Standard 2 (Two 1 point items)			
	No IEP	10823	.52
	IEP	1375	.20
	State	12198	.50
Standard 3 (One 1 point item)			
	No IEP	10823	.75
	IEP	1375	.37
	State	12198	.70
Standard 7 (One 4 point item)	No IEP	10823	1.8
	IEP	1375	.49
	State	12198	1.7

Table 56: *Average 10th^{th} grade Open-Response Item Scores by Special Education Status for Mathematics Content Standards 2, 3, 4 and 7.*

Ethnicity	*Special Education Status*	*N*	*Group Average*
Standard 2 (One 1 point item)			
	No IEP	10813	.32
	IEP	1131	.11
	State	11944	.30
Standard 3 (Two 1 point items)			
	No IEP	10813	.48
	IEP	1131	.21
	State	11944	.45
Standard 4 (One 4 point item)			
	No IEP	10813	1.1
	IEP	1131	.38
	State	11944	1.0
Standard 7 (One 4 point item)			
	No IEP	10813	1.1
	IEP	1131	.41
	State	11944	1.1

Reading Performance Disaggregated by Gender

The percentage of reading items answered correctly by gender in grades four, eight, and ten for each Reading Content Standard are reported in Tables 37 through 39 and Appendix M. Average scores for the open-response reading items are reported in Table 40. Results from Table 37 indicate the percent of reading items correct for Reading Content Standards 1, 2, 4 and 5 was similar for fourth grade males and females. Fourth grade female performance on groups of reading items administered to assess the four Reading Content Standards ranged from 61 to 73 percent correct. Fourth grade male performance on the same groups of reading items ranged from 61 to 71 percent correct. Results show that females achieved numbers of correct item responses that were several percentage points higher than males on almost all Reading Content Standards. Both male and female fourth grade students achieved the highest percent of items correct for Reading Content Standard 1 and the lowest percent correct for Reading Content Standard 3. Analysis of open-response items administered to assess Reading Content Standard 1 found that female students achieved an average score of 2.0 as compared to their male counterparts who earned an average score of 1.7.

Results from Table 38 indicate that the percent of correct responses for reading items across Reading Content Standards 1, 2, 4 and 5 was similar for eighth grade males and females. Results show that eighth grade females achieved numbers of correct item responses that were several percentage points higher than eighth grade males across all reading standards. Eight grade female performance on groups of reading items administered to assess the four Reading Content Standards ranged from 61 to 75 percent correct. Eighth grade male performance on the same groups of reading items ranged from 51 to 71 percent correct. Both eighth grade male and female students achieved the highest percent of items correct for Reading Content Standards 1

and 2 and the lowest percent of correct items for Reading Content Standard 5. Analysis of open-response reading items found that eighth grade female students achieved an average score of 2.1 as compared to their male counterparts who earned an average score of 1.7.

Results from Table 39 indicate that the percent of correct responses for reading items across Reading Content Standards 1, 2, 4 and 5 was similar for tenth grade males and females. Tenth grade female performance on reading items administered to assess the four reading standards ranged from 72 to 77 percent correct. Tenth grade male performance for the same groups of items ranged from 67 to 70 percent correct. Differences in the percent of items answered correctly by females as compared to males were somewhat larger for tenth grade students. Tenth grade female students obtained on average 6 percent more items correct than males for each of the four reading standards. Analysis of open-response items found that female students achieved an average score of 2.3 as compared to their male counterparts who earned an average score of 1.8.

Table 37: *Grade 4 Percentage of Correct Student Reponses by Gender for the Four Reading Content Standards Assessed.*

	Number of Items	Gender	N	Percent Items Correct
Standard 1	16			
		Male	5485	71
		Female	5187	73
		State	10672	72
Standard 2	16			
		Male	5485	67
		Female	5187	68
		State	10672	68
Standard 4	11			
		Male	5485	61
		Female	5187	61
		State	10672	61
Standard 5	9			
		Male	5485	66
		Female	5187	70
		State	10672	68

Table 38: *Grade 8 Percentage of Correct Student Reponses by Gender for Each Reading Content Standard.*

	Number of Items	Gender	N	Percent Items Correct
Standard 1	14			
		Male	6213	63
		Female	5985	67
		State	12198	65
Standard 2	15			
		Male	6213	71
		Female	5985	75
		State	12198	73
Standard 4	11			
		Male	6213	71
		Female	5985	75
		State	12198	73
Standard 5	12			
		Male	6213	57
		Female	5985	61
		State	12198	59

Table 39: *Grade 10 Percentage of Correct Student Reponses by Gender for Each Reading Content Standard.*

	Number of Items	Gender	N	Percent Items Correct
Standard 1	13			
		Male	6215	69
		Female	5729	77
		State	11944	73
Standard 2	18			
		Male	6215	68
		Female	5729	75
		State	11944	72
Standard 4	10			
		Male	6215	70
		Female	5729	77
		State	11944	73
Standard 5	16			
		Male	6215	67
		Female	5729	73
		State	11944	70

Table 40: *Average Open-Response Item Scores by Gender for Reading Content Standards Rated on a Four Point Scale.*

	Number of Items	*Gender*	*N*	*Group Average*
Standard 1	2			
4th Grade		Male	5485	1.7
		Female	5187	2.0
		State	10672	1.9
Standard 1	2			
		Male	6213	1.7
8th Grade				
		Female	5985	2.1
		State	12198	1.9
Standard 2	2			
		Male	6215	1.8
10th Grade				
		Female	5729	2.3
		State	11944	2.0

Mathematics Performance Disaggregated by Gender

The percentage of mathematics items answered correctly for each Mathematics Content Standard by gender for grades four, eight, and ten is reported in Tables 41 through 43 and Appendix N. Average scores for the open-response mathematics items are reported in Tables 44 through 46. Results from Table 41 indicate that the percent of mathematics items correct for all seven Mathematics Content Standards was similar for fourth grade males and females. The performance for fourth grade males on groups of items administered to assess the seven Mathematics Content Standards ranged from 56 to 79 percent correct. The performance of fourth grade females on the same groups of items 54 to 80 percent correct. Both male and female fourth grades students achieved the highest percent of items correct for Mathematics Content Standard 6. Likewise both males and females achieved the lowest percent of mathematics items for Mathematics Content Standards 1 and 5. Analysis of open-response mathematics items administered to assess Mathematics Content Standards 2 and 6 indicate that fourth grade female students evidenced only slightly higher mean scores than males.

Results from Table 42 indicate that the percent of mathematics items correct for all seven Mathematics Content Standards was similar for grade males and females. The performance for eighth grade males on groups of items administered to assess the seven Mathematics Content Standards ranged from 37 to 52 percent correct. The performance of eighth grade females on the same groups of mathematics items ranged from 35 to 50 percent correct. Both male and female eighth grade students achieved the highest percent of mathematics items correct for Mathematics Content Standards 6 and 7. Likewise both males and females achieved the lowest percent of mathematics items for Mathematics Content Standard 5. Eighth grade females answered correctly just over 50 percent of the items for only Mathematics Content Standard 6. Likewise,

eighth grade males achieved just over 50 percent of items correct for only Mathematics Content

Standard 7. Analysis of open-response mathematics items designed to assess Mathematics

Content Standards 1, 2, 3 and 7 found that eighth grade female students earned only slightly

higher average scores than eighth grade male students.

Results from Table 43 indicate that the percent of mathematics items correct for all seven

Mathematics Content Standards was again similar for tenth grade males and females. The

performance for tenth grade males on groups of items administered to assess the seven

Mathematics Content Standards ranged from 42 to 56 percent correct. The performance of tenth

grade female students on the same groups of items ranged from 29 to 57 percent correct. Both

tenth grade male and female students achieved the highest percent of mathematics items correct

for Mathematics Content Standards 6 and 7. Likewise tenth grade males and females achieved

the lowest percent of mathematics items for Mathematics Content Standard 1. Results from the

analysis of open-response written to assess tenth grade Mathematics Content Standards 2, 3, 4,

and 7 indicated only slight differences between male and female average scores.

Table 41: *Grade 4 Percentage of Correct Student Reponses by Gender for Each Mathematics Content Standard.*

	Number of Items	Gender	N	Percent Items Correct
Standard 1	7			
		Male	5485	56
		Female	5187	57
		State	10672	57
Standard 2	7			
		Male	5485	65
		Female	5187	62
		State	10672	63
Standard 3	6			
		Male	5485	68
		Female	5187	67
		State	10672	68
Standard 4	11			
		Male	5485	64
		Female	5187	64
		State	10672	64
Standard 5	7			
		Male	5485	58
		Female	5187	55
		State	10672	57
Standard 6	9			
		Male	5485	79
		Female	5187	80
		State	10672	79
Standard 7	6			
		Male	5485	57
		Female	5187	54
		State	10672	56

Table 42: *Grade 8 Percentage of Correct Student Reponses by Gender for Each Mathematics Content Standards.*

	Number of Items	Gender	N	Percent Items Correct
Standard 1	7			
		Male	6213	49
		Female	5985	43
		State	12198	46
Standard 2	8			
		Male	6213	45
		Female	5985	46
		State	12198	48
Standard 3	9			
		Male	6213	42
		Female	5985	46
		State	12198	44
Standard 4	11			
		Male	6213	49
		Female	5985	49
		State	12198	49
Standard 5	5			
		Male	6213	37
		Female	5985	35
		State	12198	36
Standard 6	8			
		Male	6213	50
		Female	5985	51
		State	12198	50
Standard 7	6			
		Male	6213	52
		Female	5985	50
		State	12198	51

Table 43: *Grade 10 Percentage of Correct Student Reponses by Gender for Each Mathematics Content Standards.*

	Number of Items	*Gender*	*N*	*Percent Items Correct*
Standard 1	9			
		Male	6215	32
		Female	5729	29
		State	11944	31
Standard 2	6			
		Male	6215	47
		Female	5729	45
		State	11944	46
Standard 3	9			
		Male	6215	52
		Female	5729	55
		State	11944	54
Standard 4	10			
		Male	6215	43
		Female	5729	43
		State	11944	43
Standard 5	5			
		Male	6215	51
		Female	5729	51
		State	11944	51
Standard 6	13			
		Male	6215	53
		Female	5729	52
		State	11944	53
Standard 7	7			
		Male	6215	56
		Female	5729	57
		State	11944	56

Table 44: *Average 4th grade Open-Response Item Scores by Gender for Mathematics Content Standards 2 and 6.*

	Gender	*N*	*Group Average*
Standard 2			
Three 1 point items			
	Male	5485	.62
	Female	5187	.64
	State	10672	.63
One 4 point item			
	Male	5485	2.0
	Female	5187	2.0
	State	10672	2.0
Standard 6			
One 4 point item			
	Male	5485	2.0
	Female	5187	2.2
	State	10672	2.1

Table 45: *Average 8th^th^ grade Open-Response Item Scores by Gender for Mathematics Content Standards 1, 2, 3 and 7.*

	Gender	N	Group Average
Standard 1 (One 4 point item)			
	Male	6213	1.8
	Female	5985	2.0
	State	12198	1.9
Standard 2 (Two 1 point items)			
	Male	6213	.47
	Female	5985	.49
	State	12198	.50
Standard 3 (One 1 point item)			
	Male	6213	.70
	Female	5985	.72
	State	12198	.70
Standard 7 (One 4 point item)	Male	6213	1.6
	Female	5985	1.7
	State	12198	1.7

Table 46: *Average 10th*th *grade Open-Response Item Scores by Gender for Mathematics Content Standards 2, 3, 4 and 7.*

	Gender	N	Group Average
Standard 2 (One 1 point item)			
	Male	6215	.3
	Female	5729	.3
	State	11944	.3
Standard 3 (Two 1 point items)			
	Male	6215	.42
	Female	5729	.48
	State	11944	.45
Standard 4 (One 4 point item)			
	Male	6215	1.0
	Female	5729	1.1
	State	11944	1.0
Standard 7 (One 4 point item)			
	Male	6215	1.0
	Female	5729	1.1
	State	11944	1.1

Appendix A

Fourth Grade Reading Performance by Ethnicity
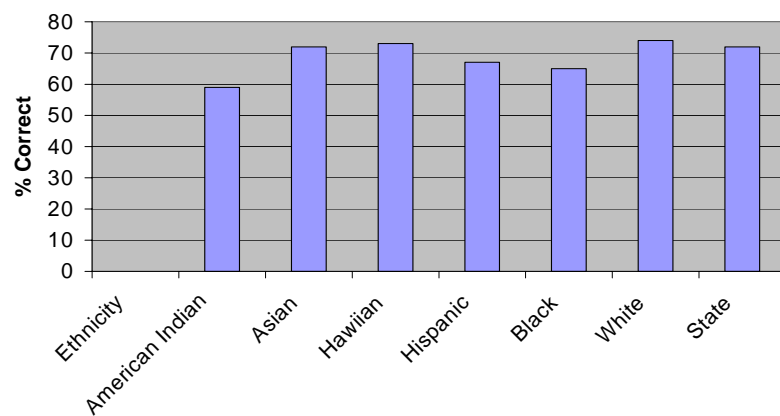
Standard 1
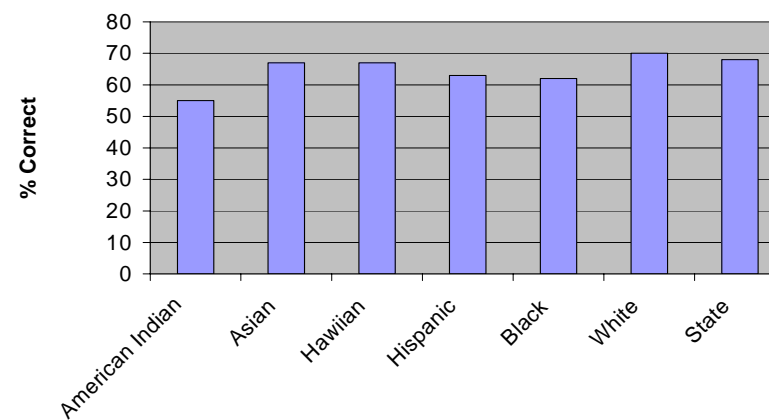
Standard 2
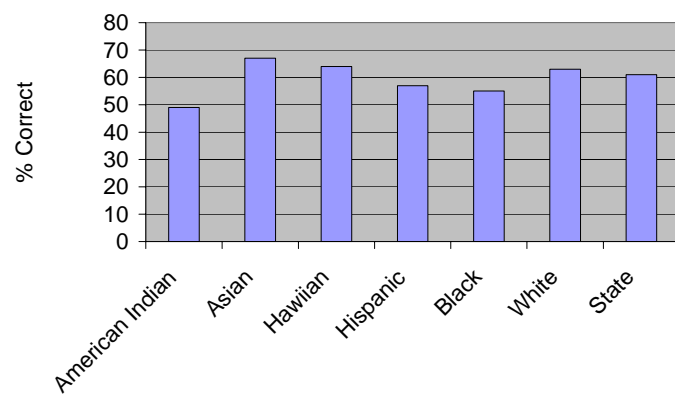
Standard 4
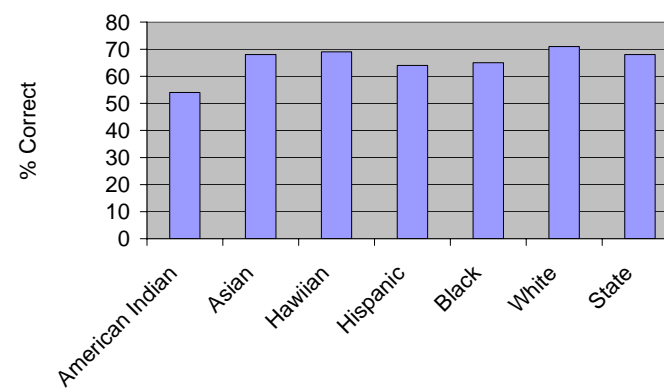
Standard 5

Appendix B

Eighth Grade Reading Performance By Ethnicity
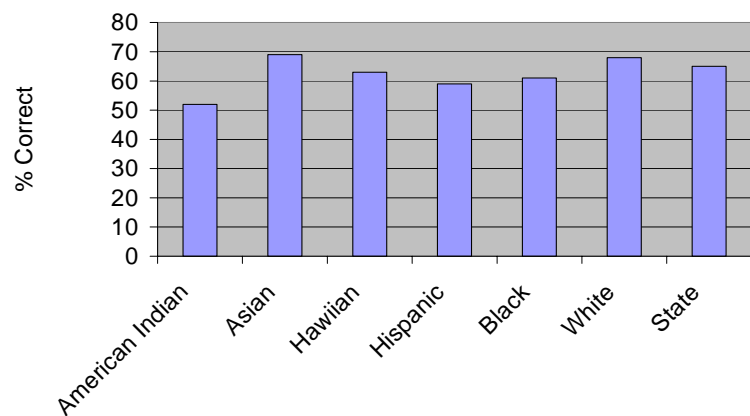
Standard 1
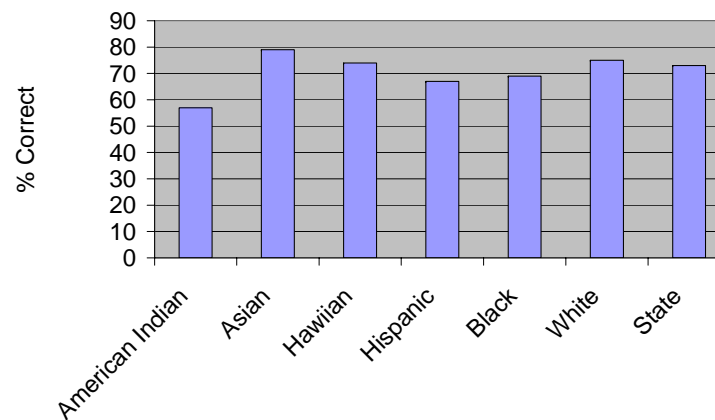
Standard 2
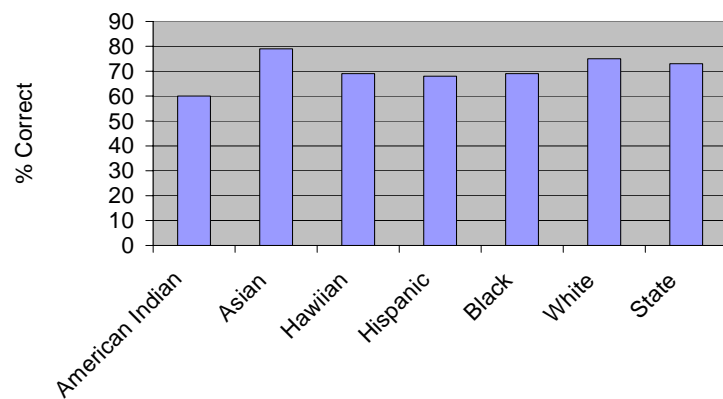
Standard 4
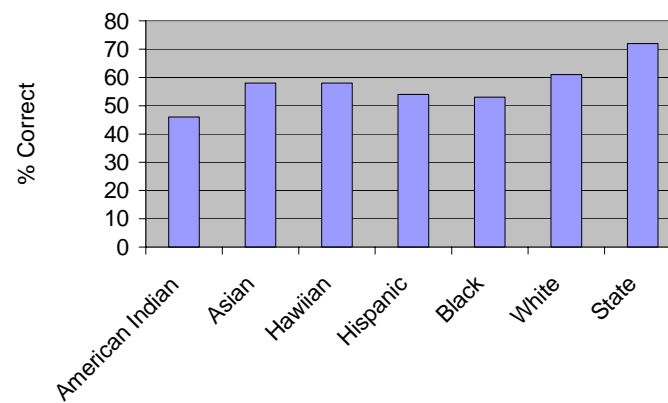
Standard 5

Appendix C

Tenth Grade Reading Performance by Ethnicity
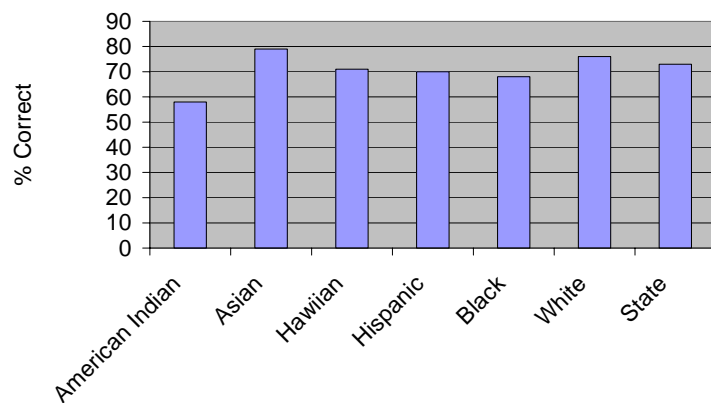
Standard 1
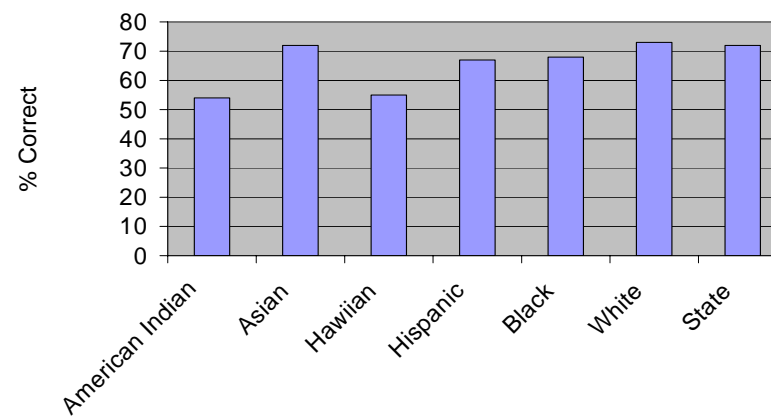
Standard 2
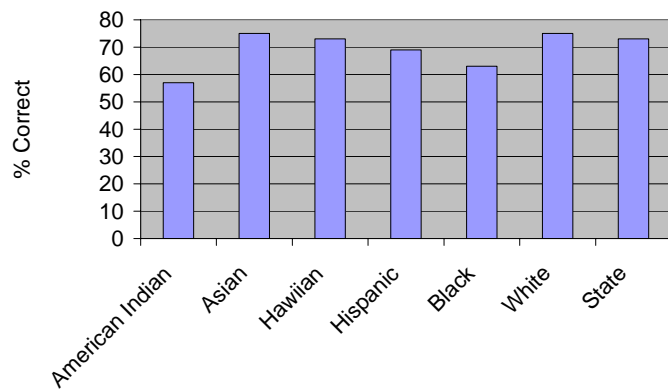
Standard 4
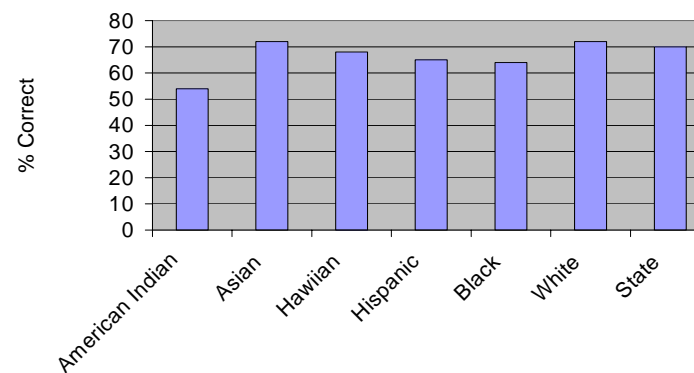
Standard 5

Appendix D

Fourth Grade Math Performance by Ethnicity
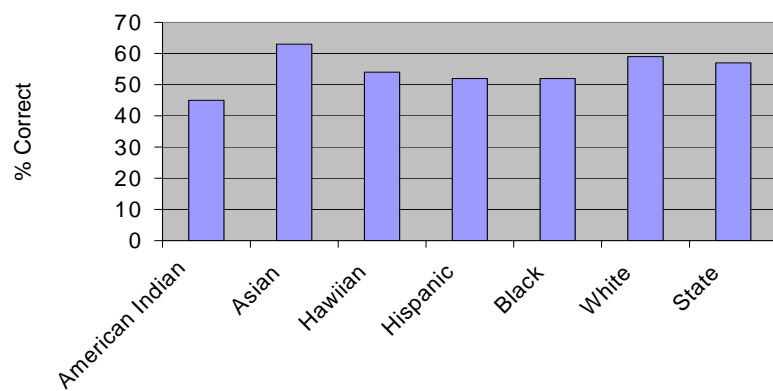
Standard 1
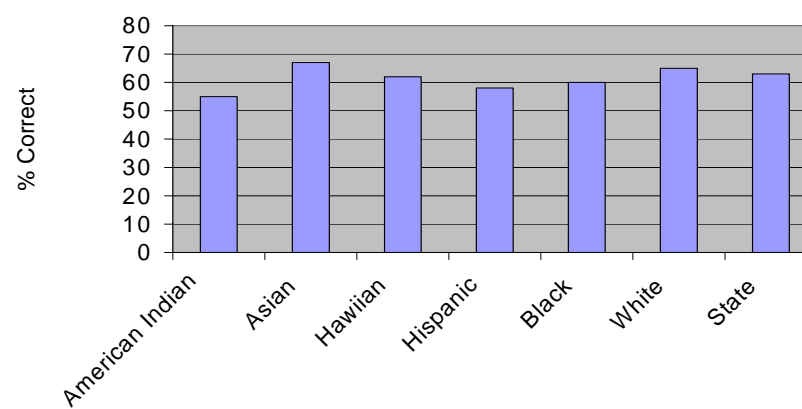
Standard 2
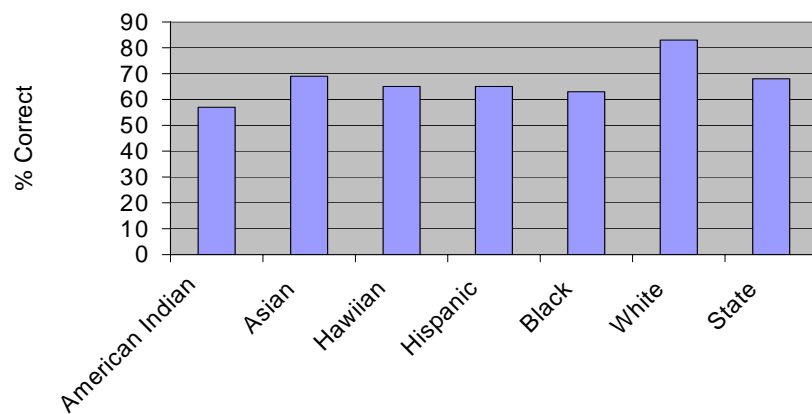
Standard 3
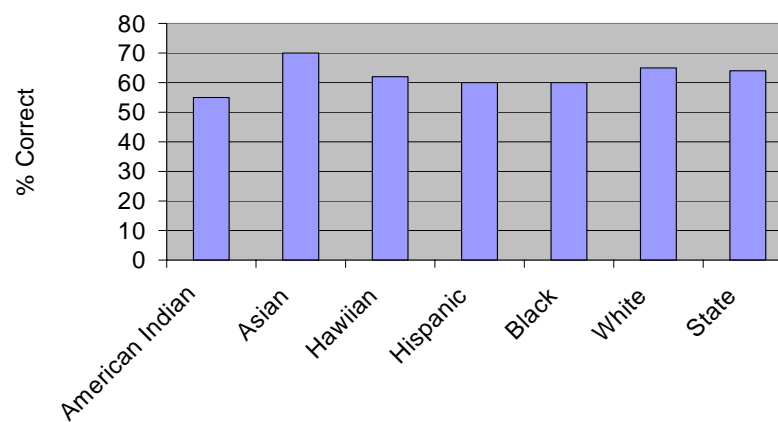
Standard 4

Appendix D (continued)

Fourth Grade Math Performance by Ethnicity
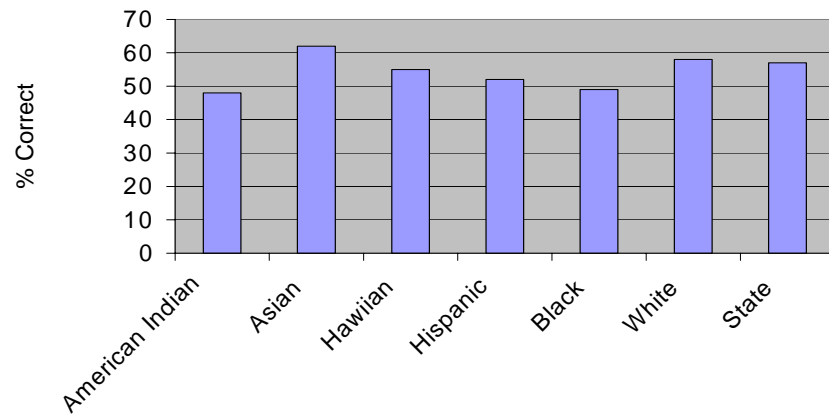
Standard 5
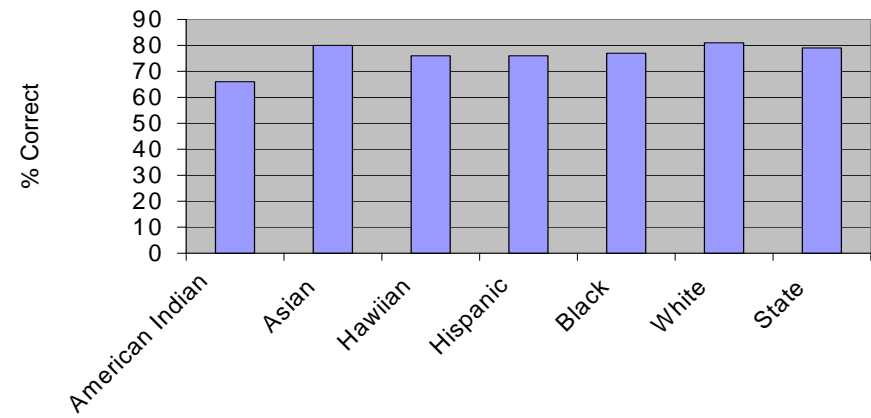
Standard 6
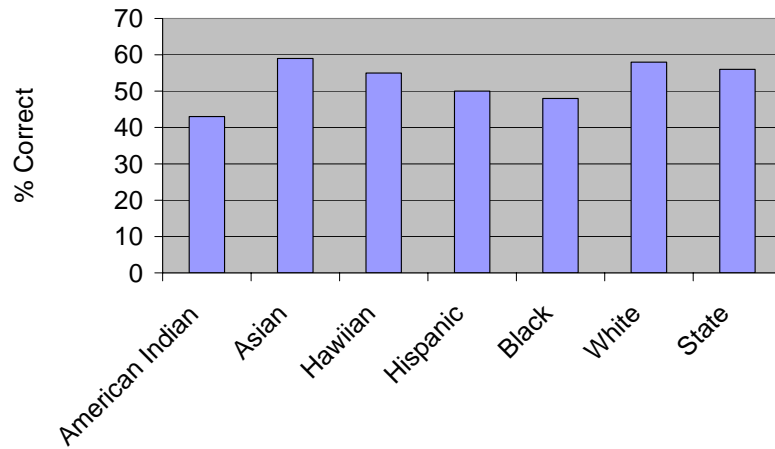
Standard 7

Appendix E

Eighth Grade Math Performance by Ethnicity
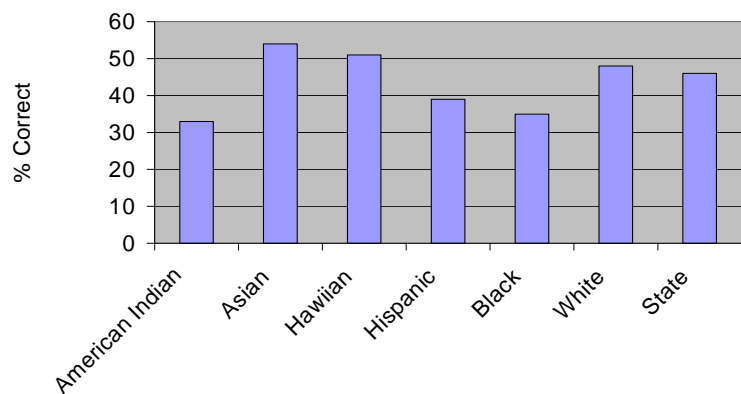
Standard 1
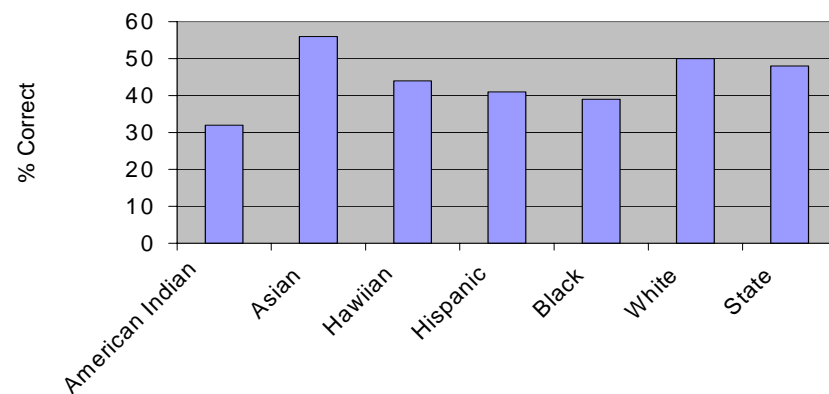
Standard 2
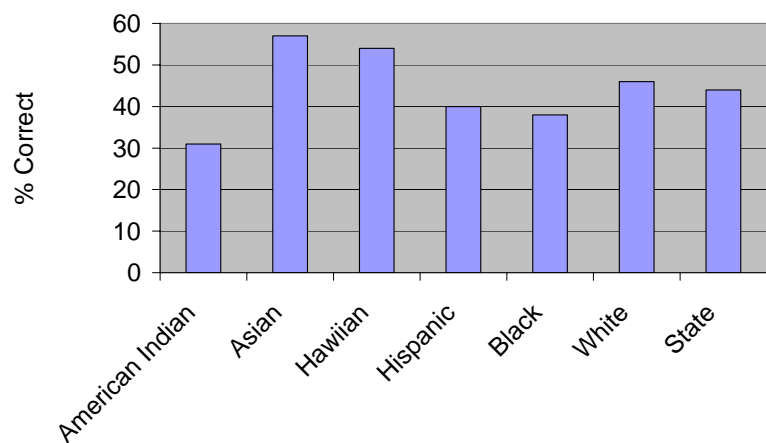
Standard 3
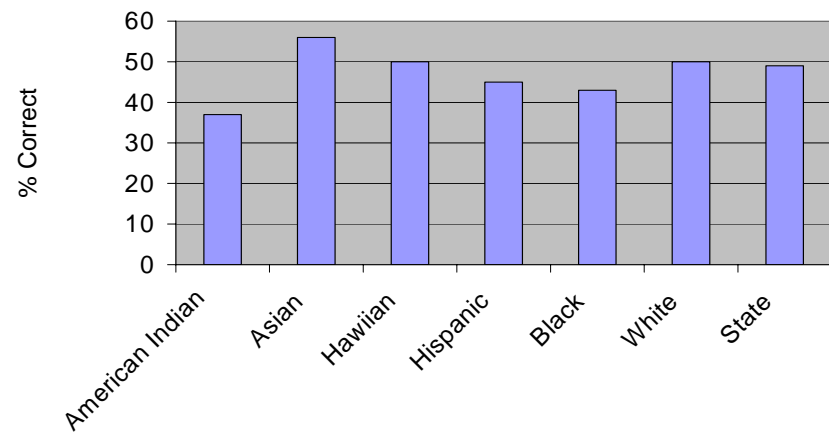
Standard 4

Appendix E (continued)

Eighth Grade Math Performance by Ethnicity
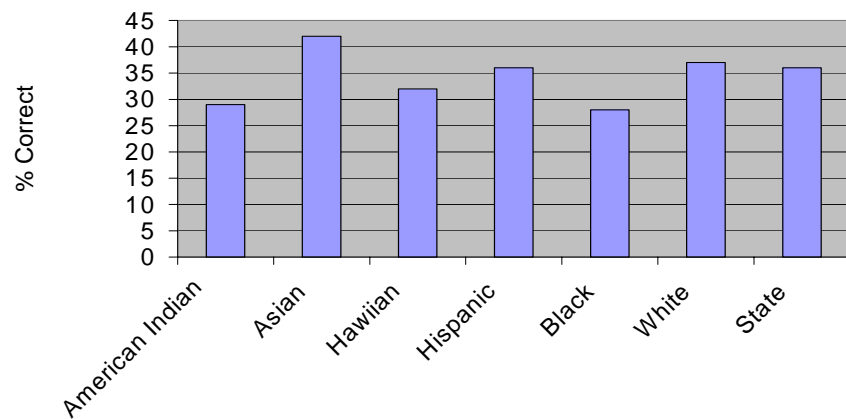
Standard 5
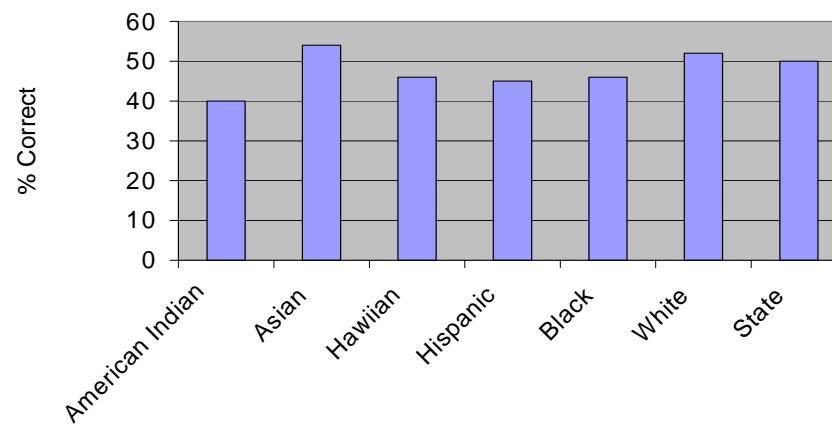
Standard 6
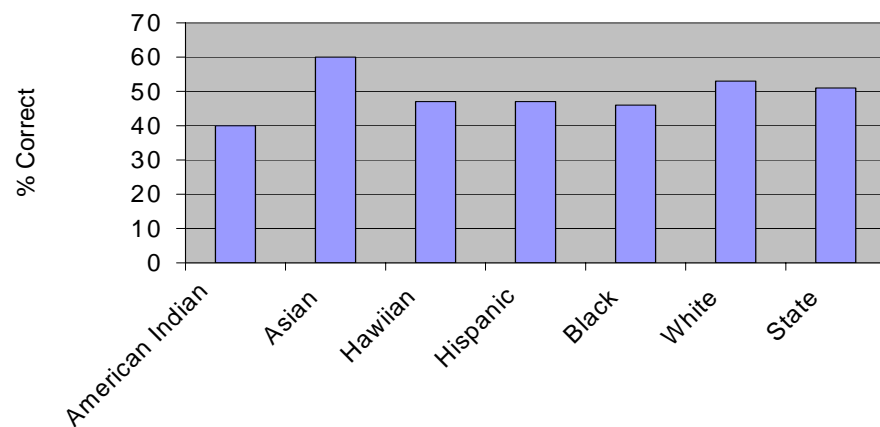
Standard 7

Appendix F

Tenth Grade Math Performance by Ethnicity

Standard 1

Standard 2

Standard 3
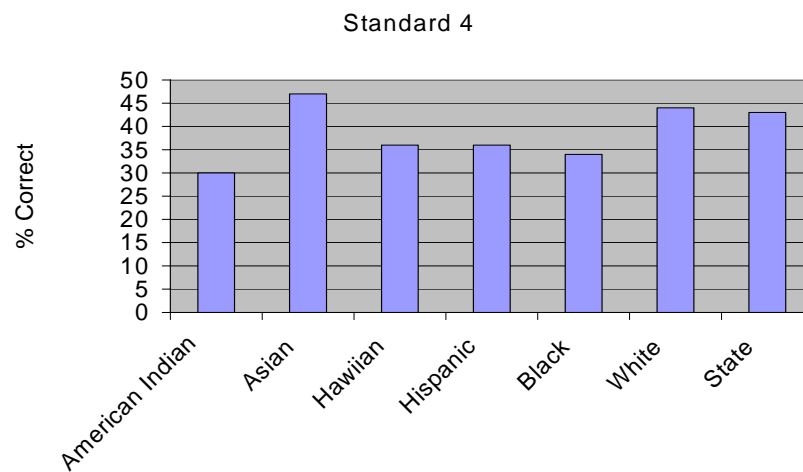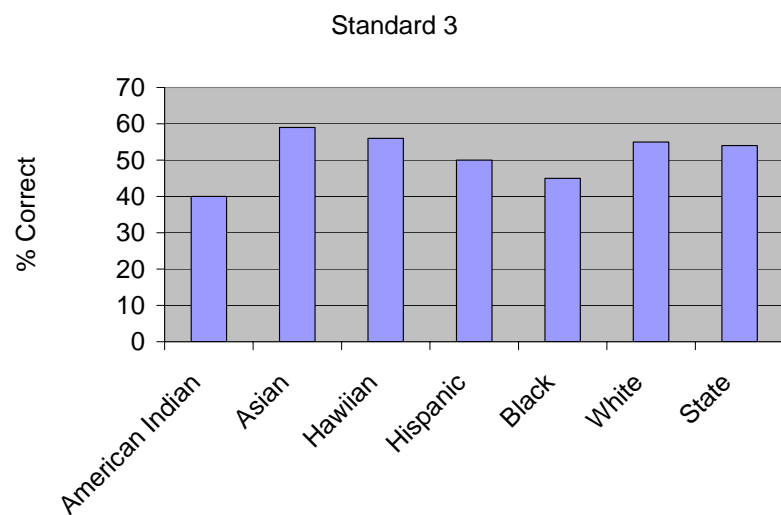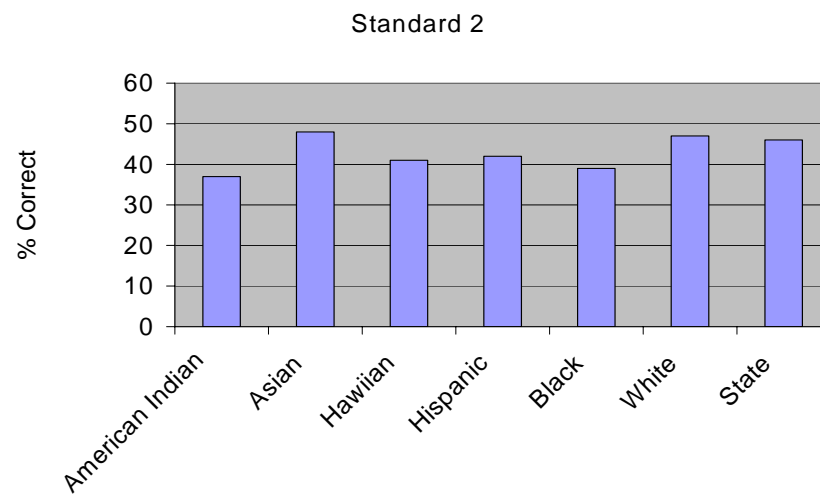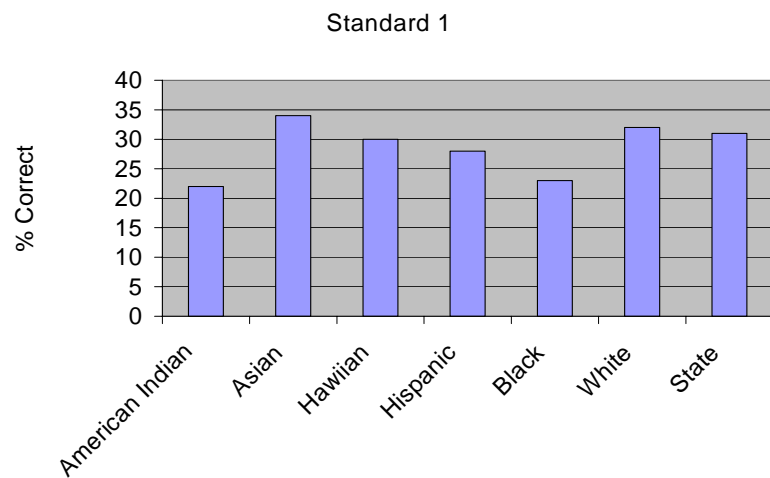
Standard 4

Appendix F (continued)

Tenth Grade Math Performance by Ethnicity
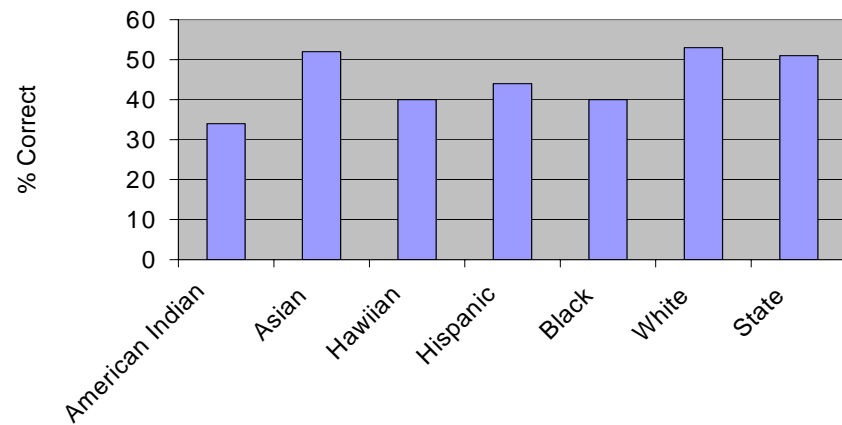
Standard 5
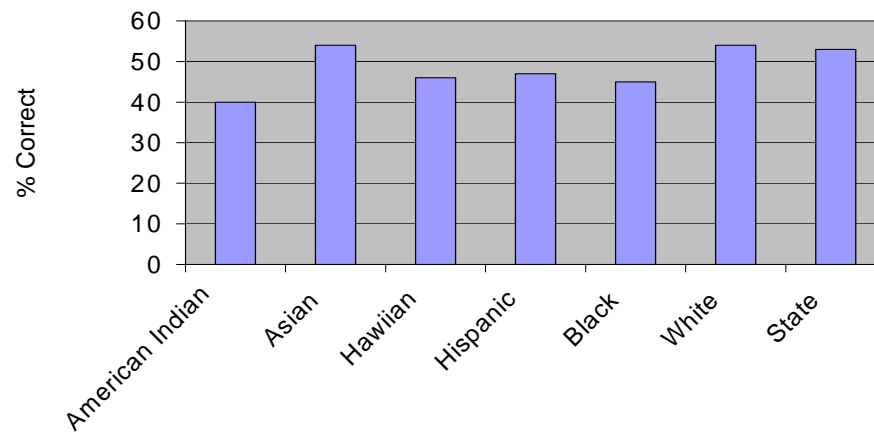
Standard 6
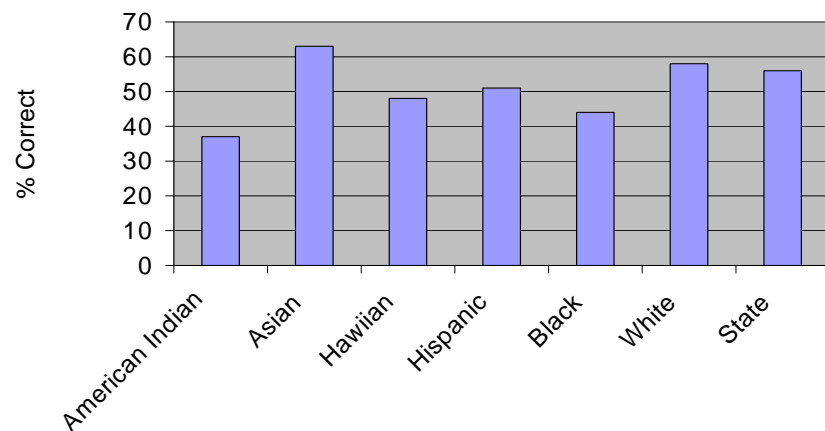
Standard 7

Appendix G

Performance on Reading Standards By Free and Reduced Lunch Status (No = Not On F/RL; Yes = On F/RL).

Fourth Grade

Eighth Grade

Tenth Grade
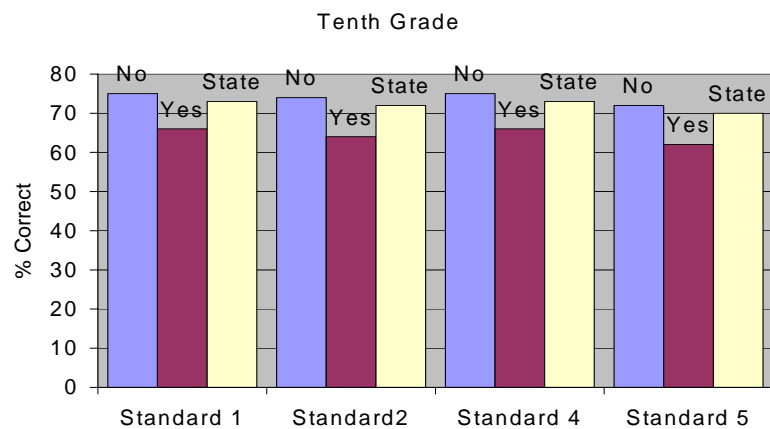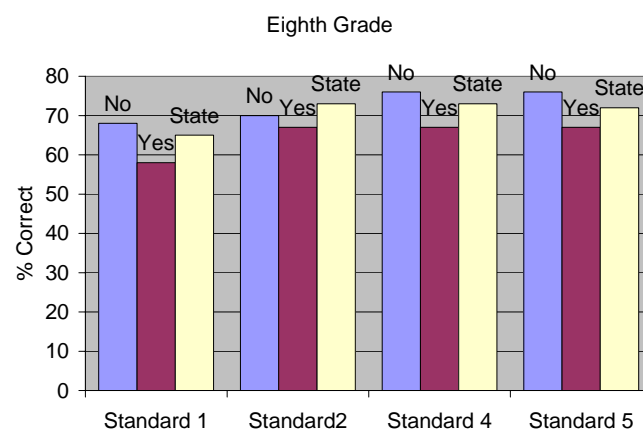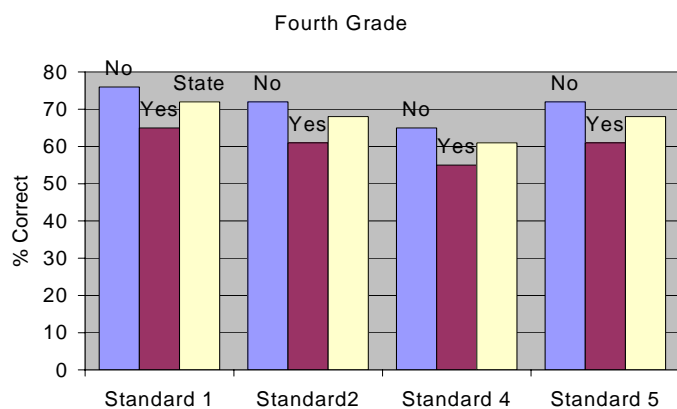
Appendix H

Performance on Mathematics Standards by Free and Reduced Lunch Status ((No = Not On F/RL; Yes = On F/RL).

Fourth Grade
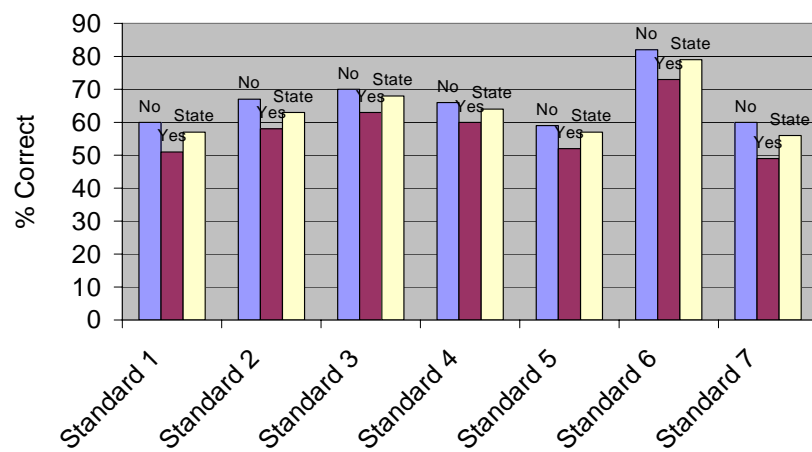
Eighth
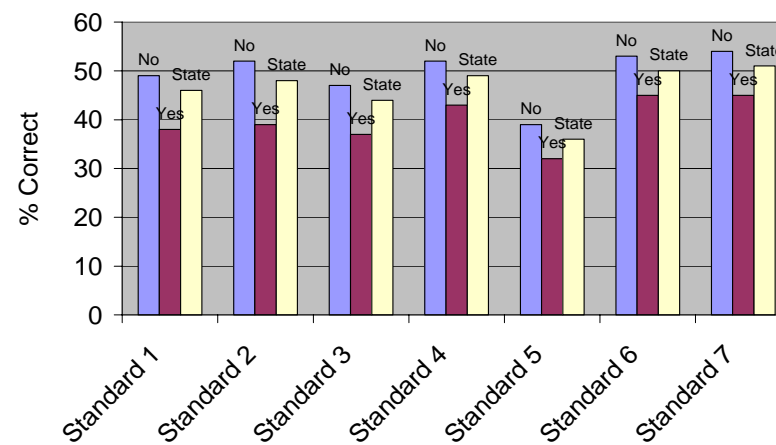
Appendix H (continued)

Performance on Mathematics Standards by Free and Reduced Lunch Status ((No = Not On F/RL; Yes = On F/RL).

Tenth Grade
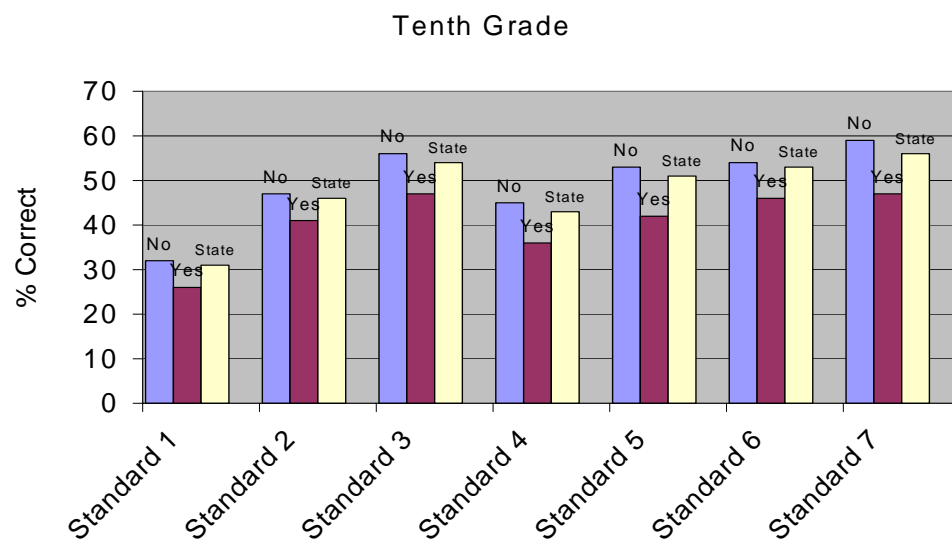
Appendix I

Performance on Reading Standards By LEP/ELL Status (No = Not LEP/ELL; Yes = LEP/ELL).

Fourth Grade

Eighth Grade
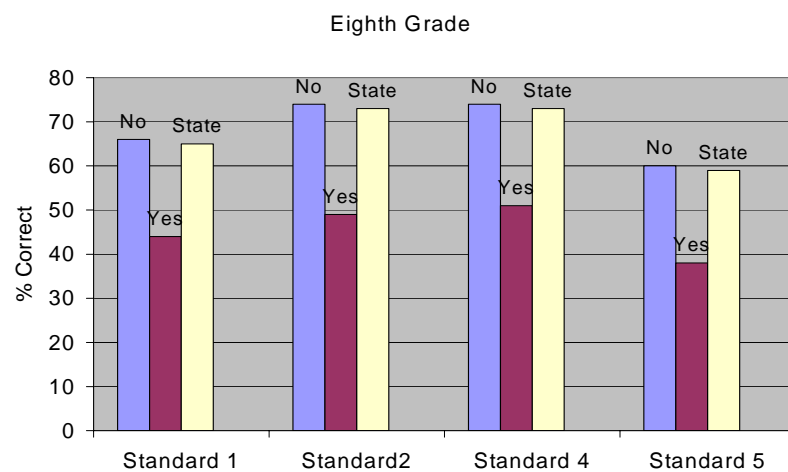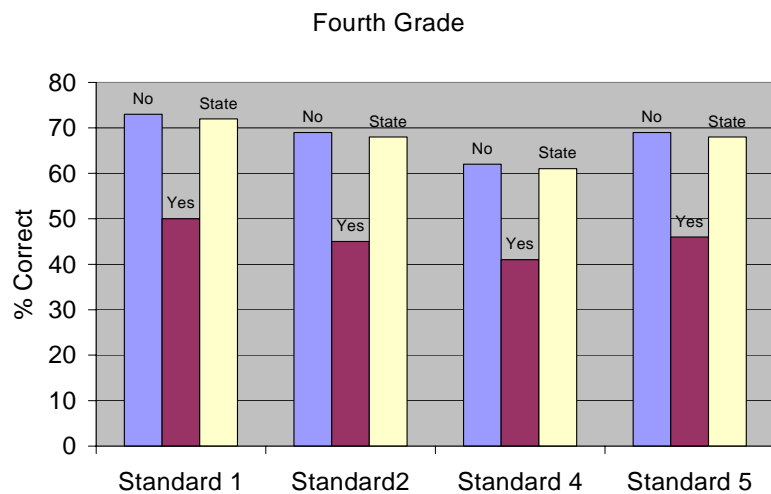
Appendix I (continued)

Performance on Reading Standards By LEP/ELL Status (No = Not LEP/ELL; Yes = LEP/ELL).

Tenth Grade
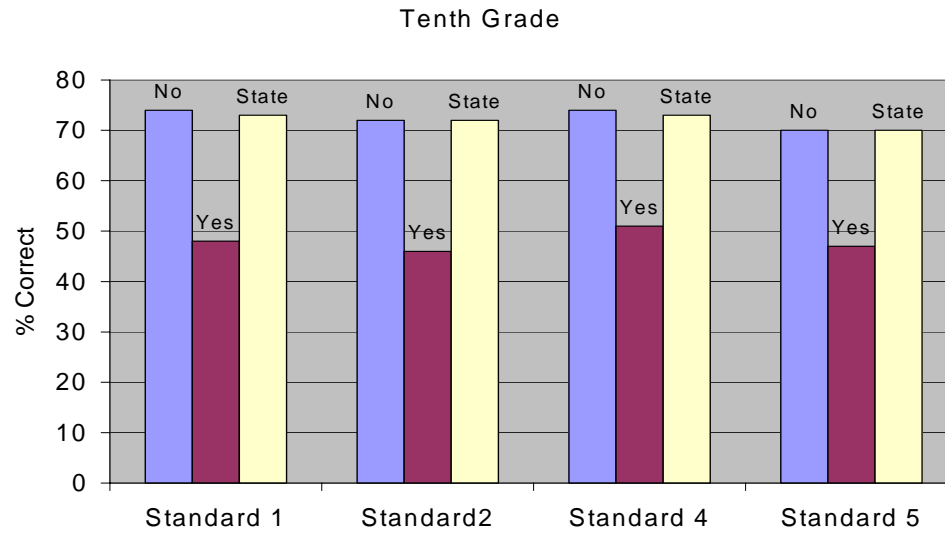
Appendix J

Performance on Math Standards by LEP/ELL Status (No = Not LEP/ELL; Yes = LEP/ELL)
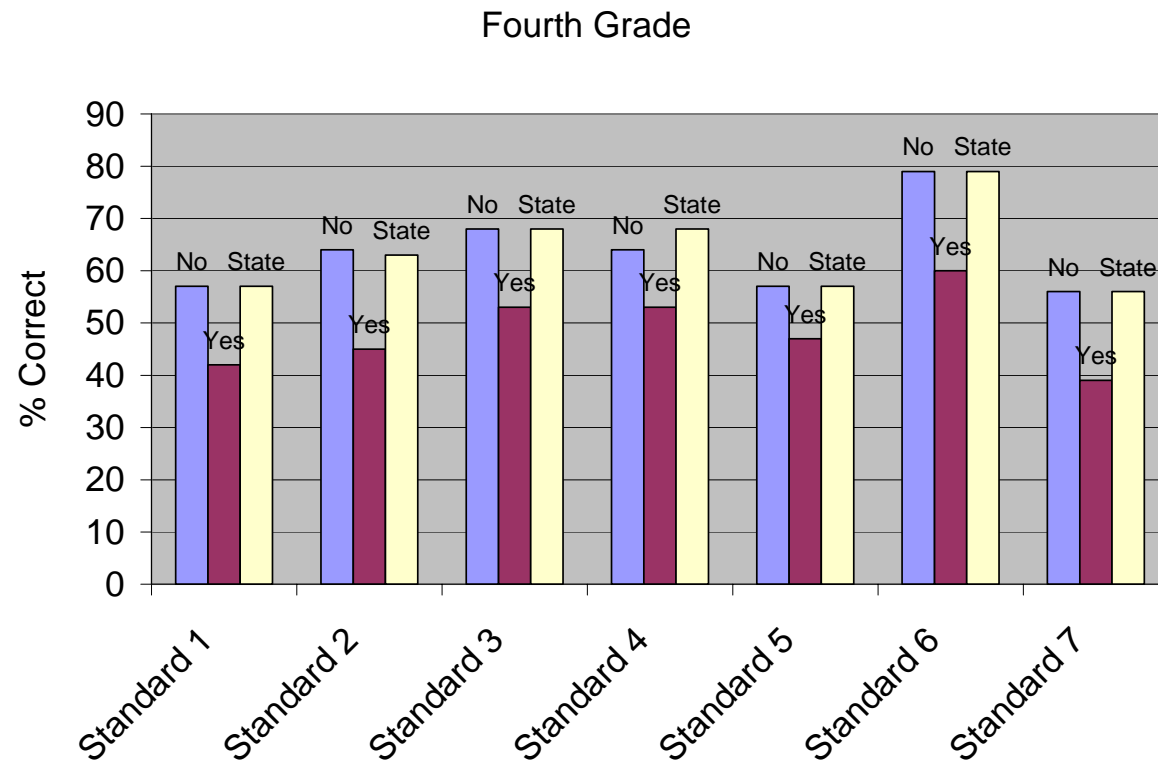
Fourth Grade

Appendix J (continued)

Performance on Math Standards by LEP/ELL Status (No = Not LEP/ELL; Yes = LEP/ELL).

Eighth Grade

Appendix J (continued)

Performance on Math Standards by LEP/ELL Status (No = Not LEP/ELL; Yes = LEP/ELL).

Tenth Grade
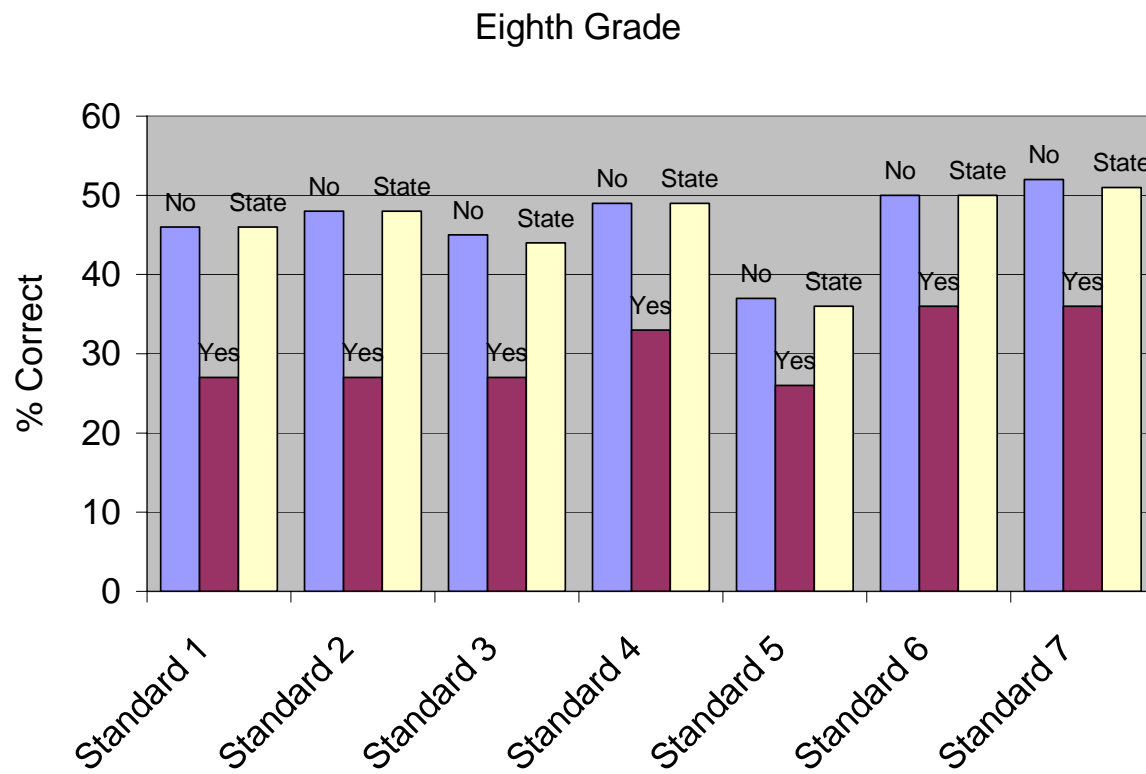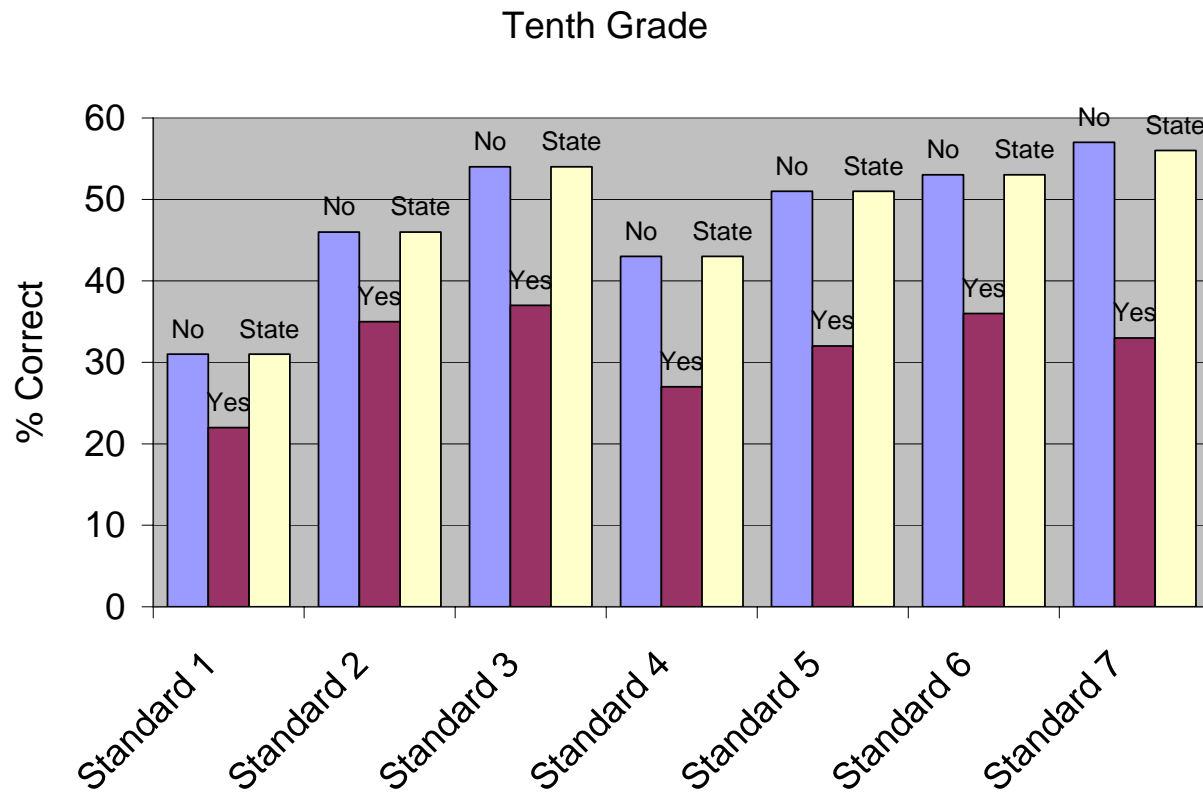
Appendix K

Performance on Reading Standards By Special Education Status (IEP = Special Education; No IEP = No Special Education).

Fourth Grade

Eighth
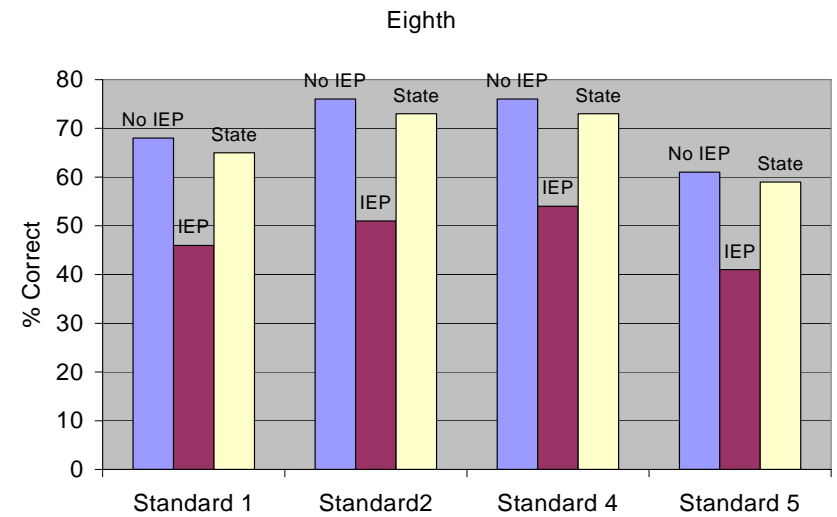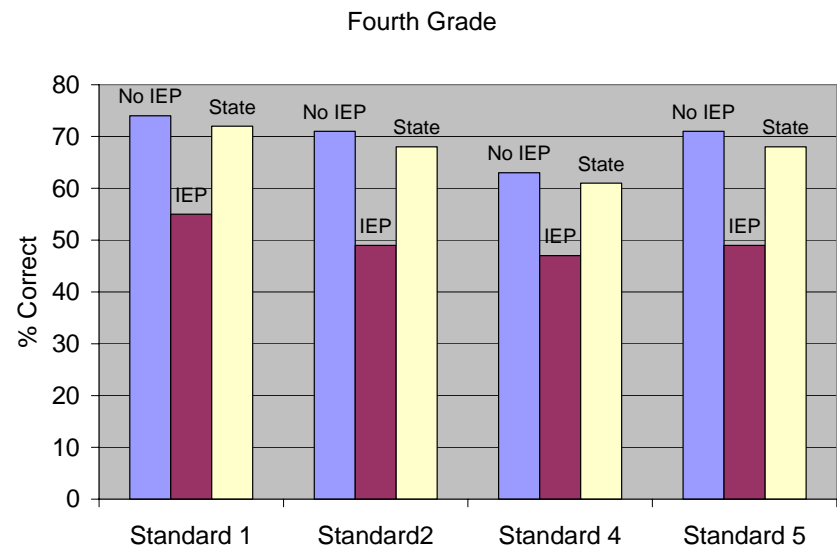
Appendix K (continued)

Performance on Reading Standards By Special Education Status (IEP = Special Education; No IEP = No Special Education).

Tenth
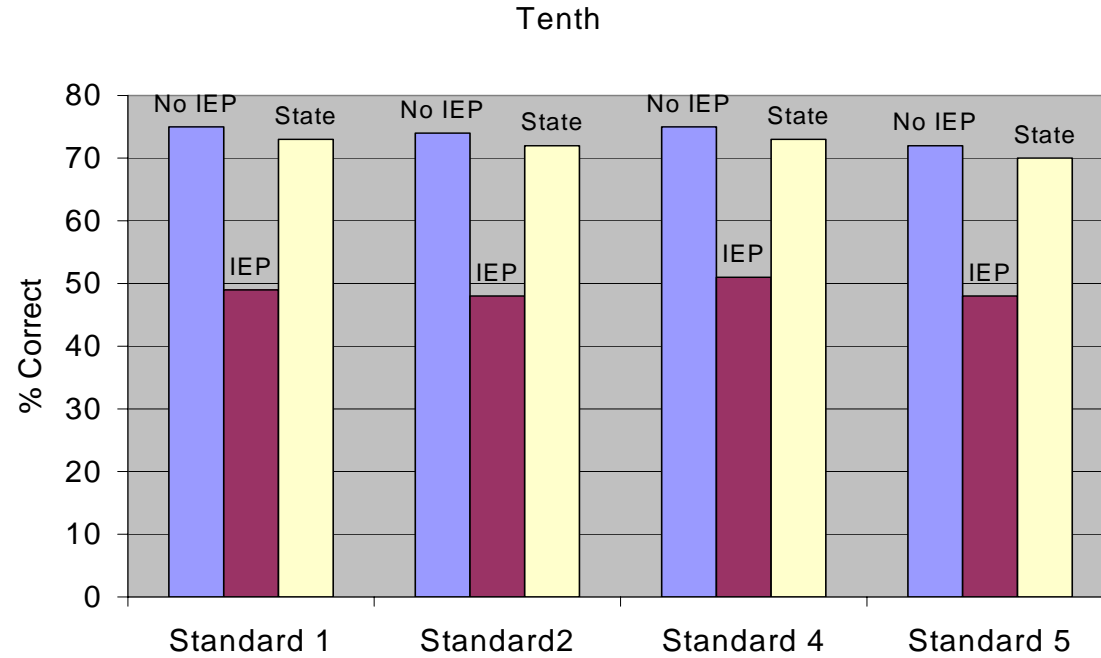
Appendix L

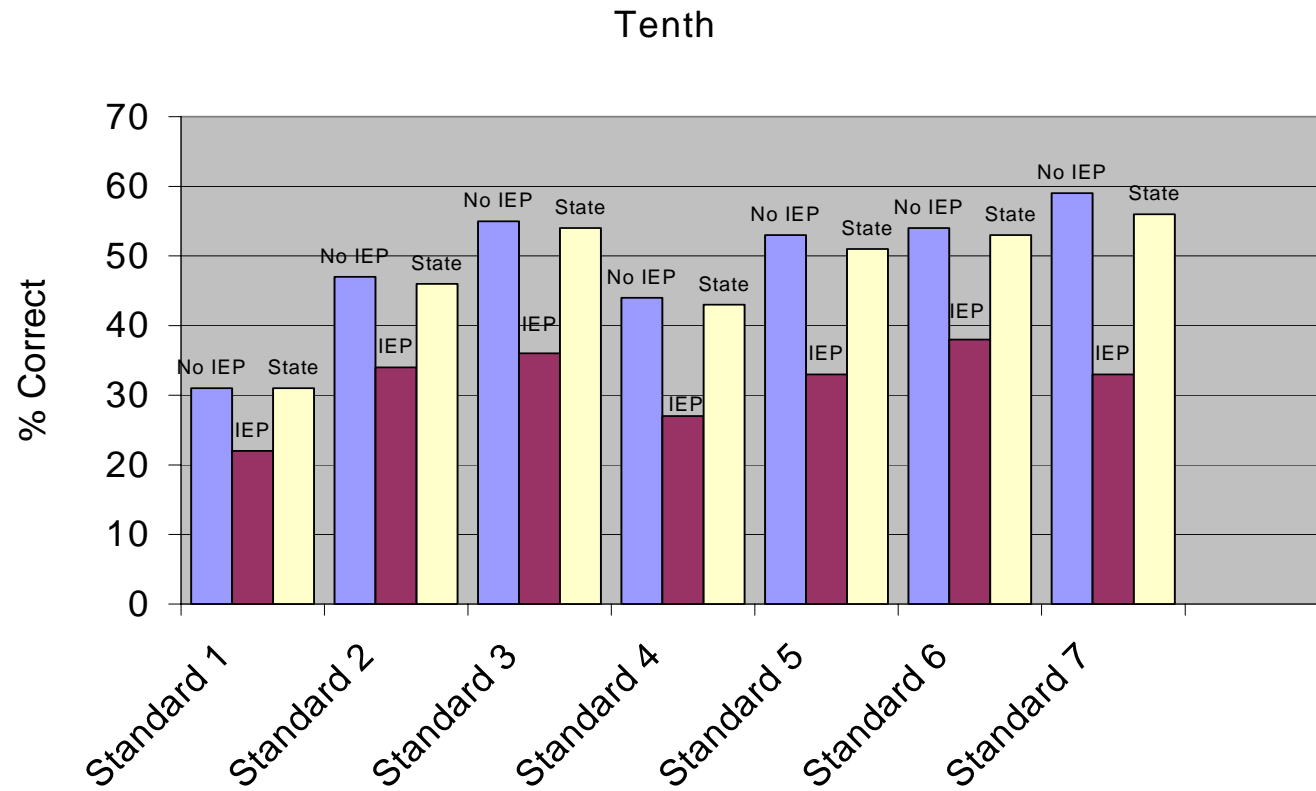Performance on Mathematics Standards by Special Education Status (IEP = Special Education; No IEP = No Special Education).
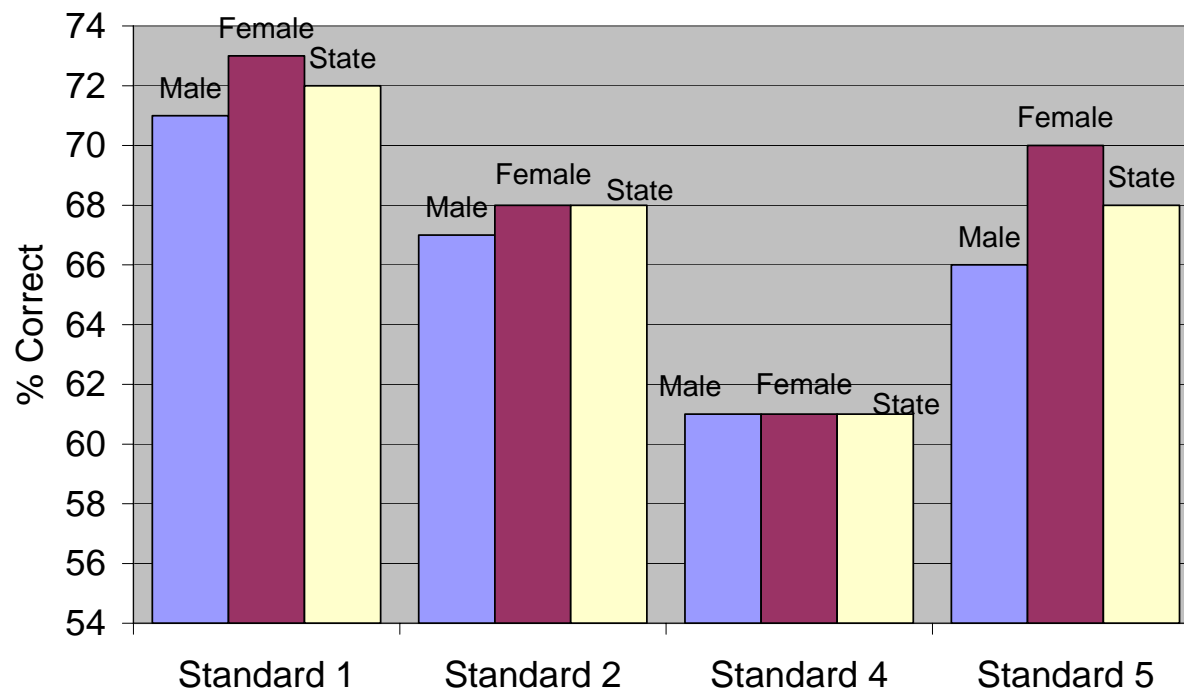
Fourth

Appendix L (continued)

Performance on Mathematics Standards by Special Education Status (IEP = Special Education; No IEP = No Special Education).

Eighth

Appendix L (continued)

Performance on Mathematics Standards by Special Education Status (IEP = Special Education; No IEP = No Special Education).

Tenth
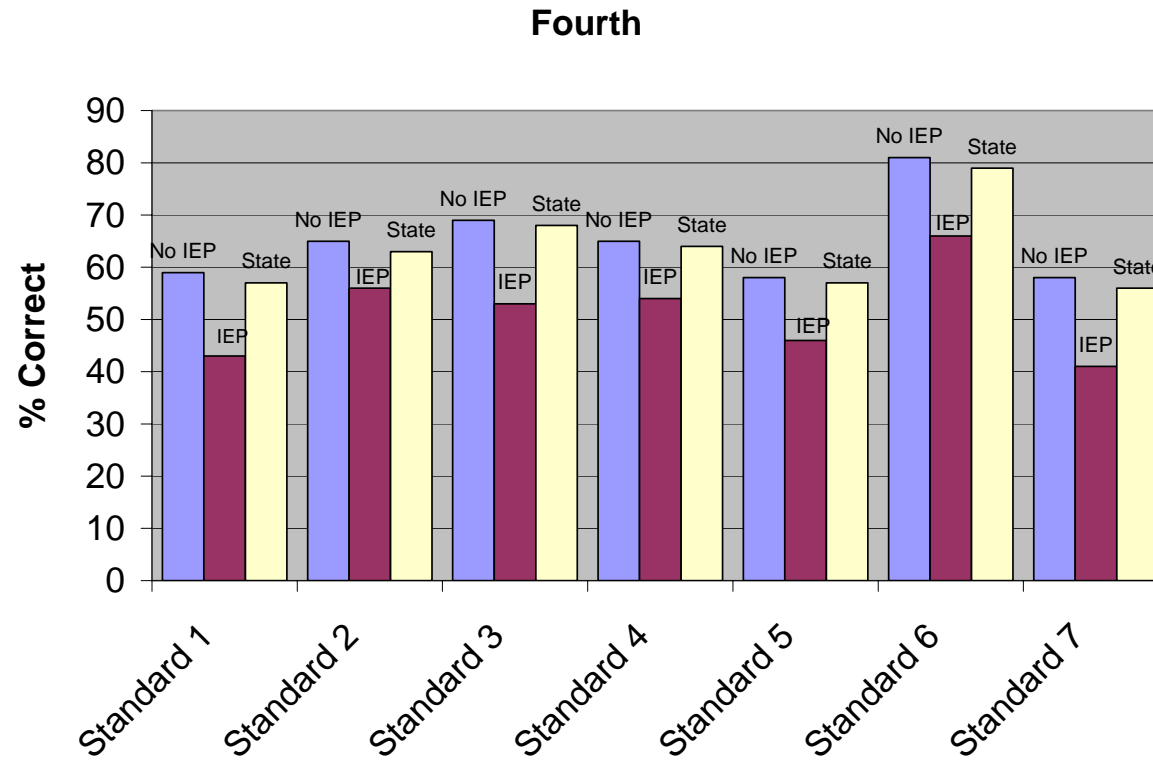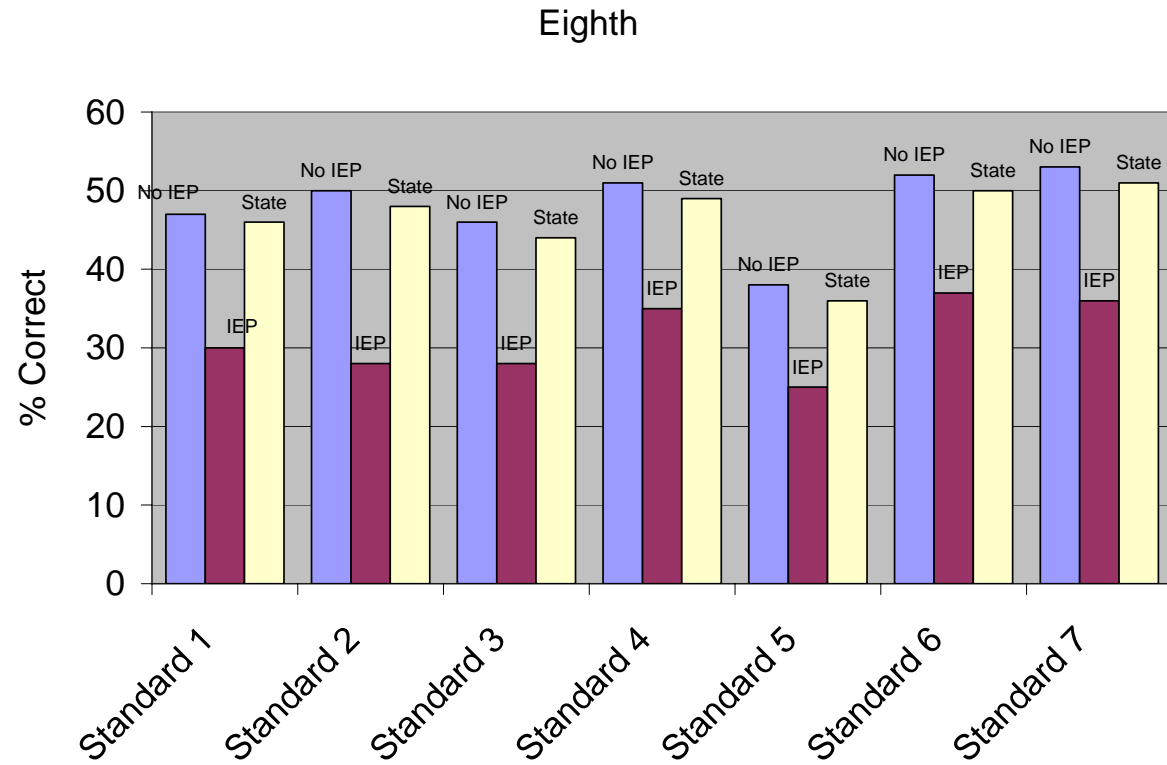
Appendix M

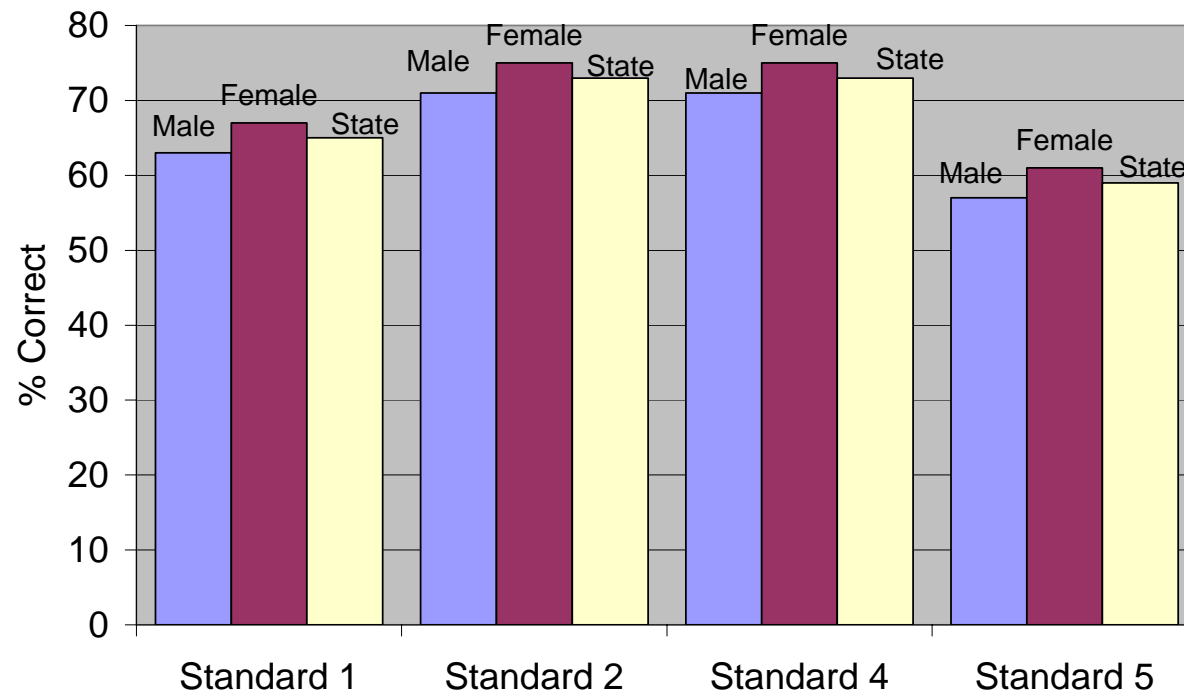Performance on Reading Standards by Gender

Fourth Grade

Appendix M (continued)
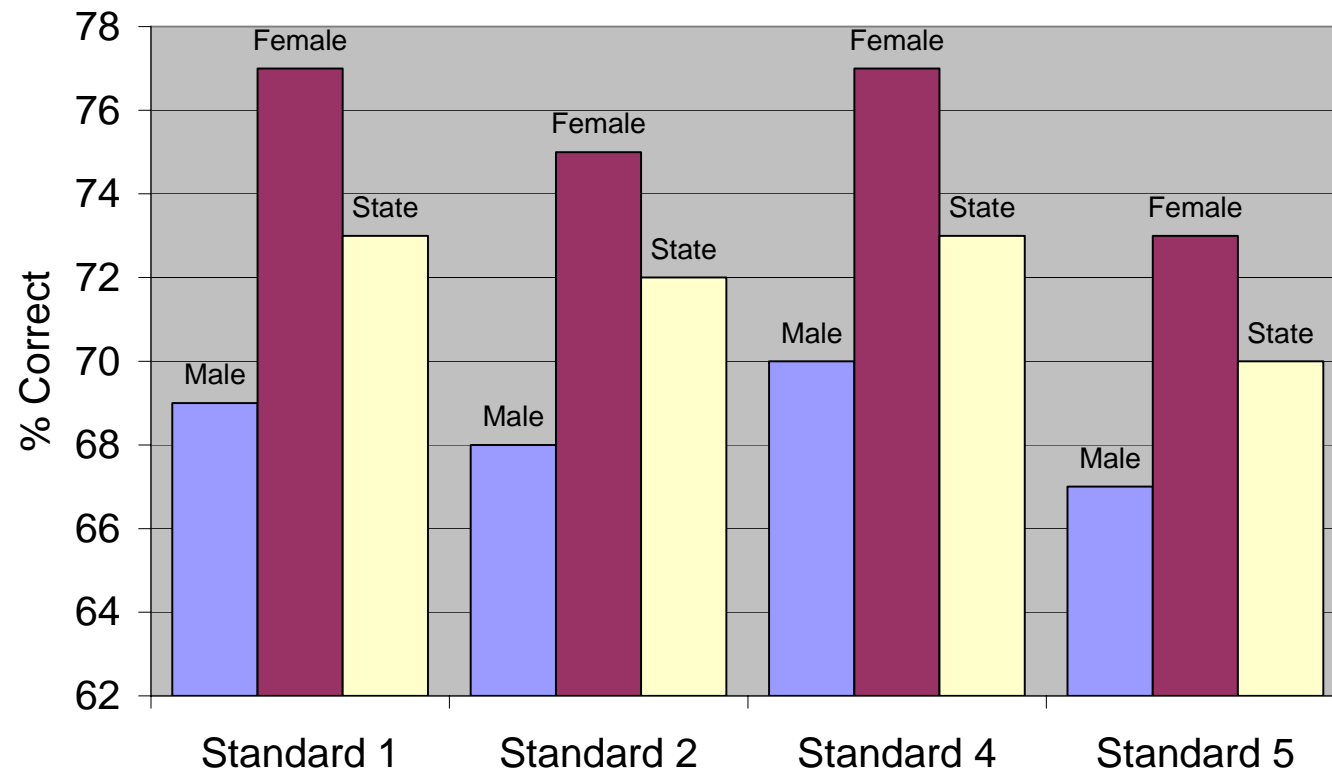
Performance on Reading Standards by Gender

Eighth Grade

Appendix M (continued)
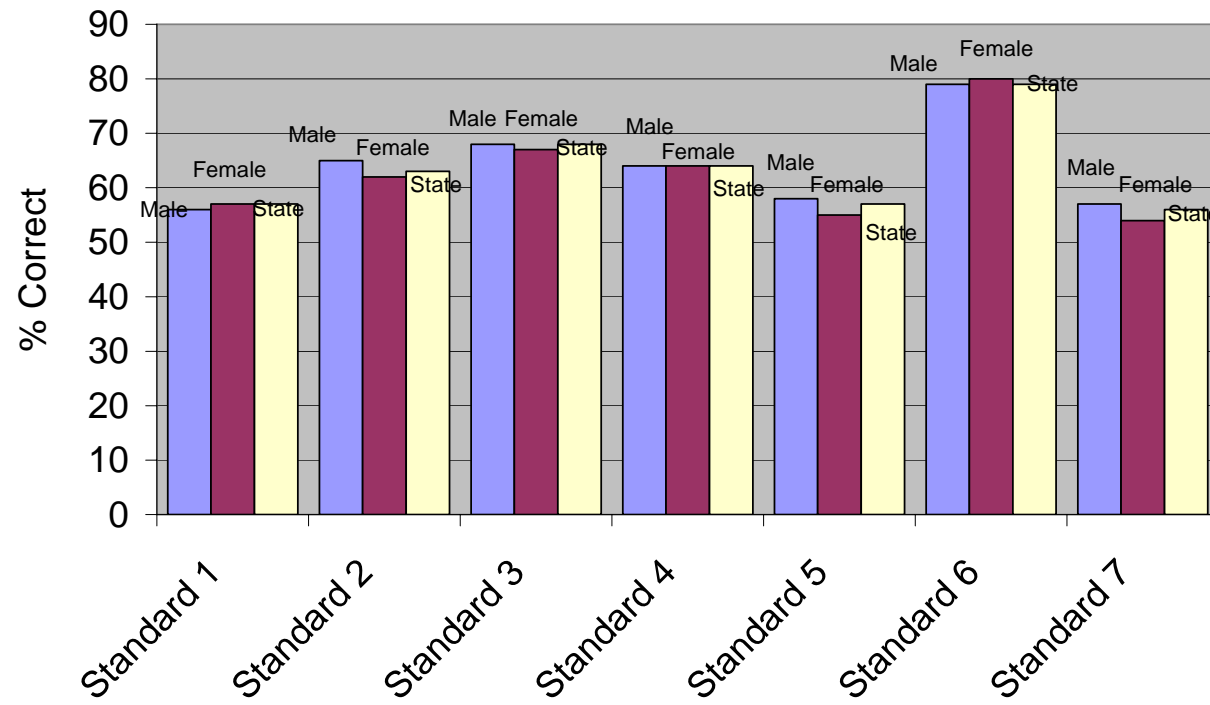
Performance on Reading Standards by Gender

Tenth Grade

Appendix N
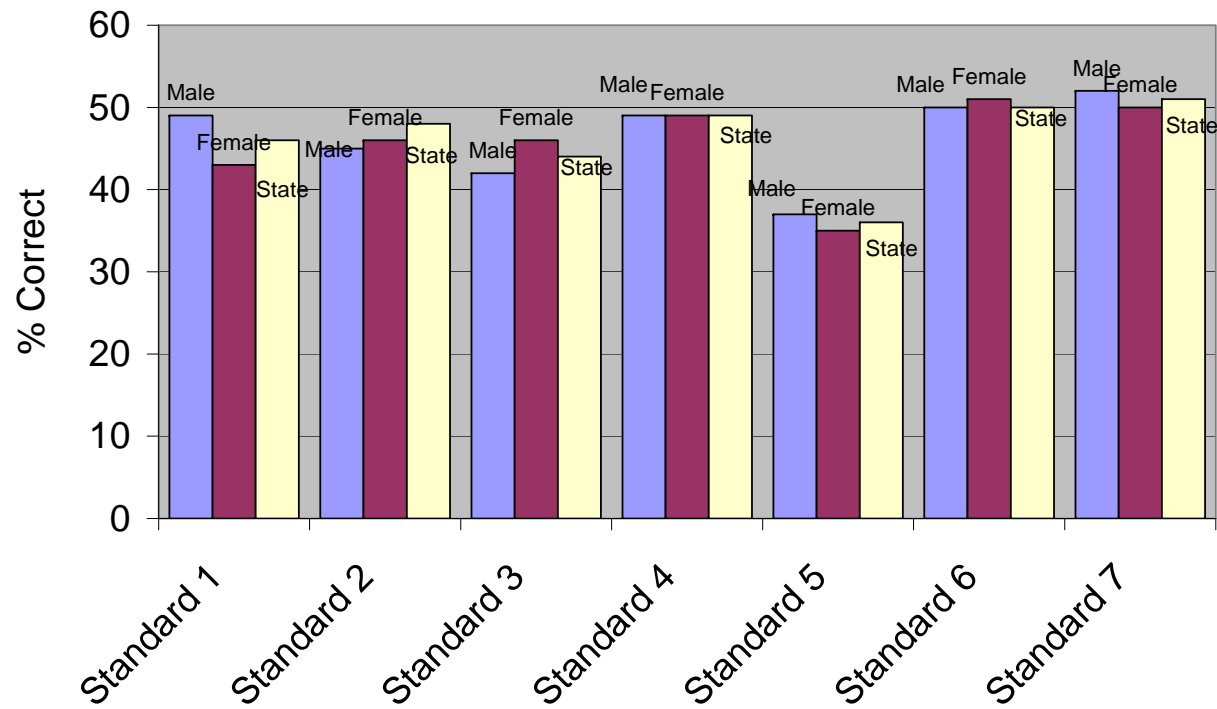
Performance on Mathematics Standards by Gender

Fourth Grade

Appendix N (continued)

Performance on Math Standards by Gender

Eighth Grade

Bar chart titled "Eighth Grade" showing % Correct (y-axis, 0 to 60) across Standards 1 through 7 (x-axis), with three bars each labeled Male, Female, and State.

Approximate values:
- Standard 1: Male 49, Female 43, State 46
- Standard 2: Male 45, Female 46, State 48
- Standard 3: Male 42, Female 46, State 44
- Standard 4: Male 49, Female 49, State 49
- Standard 5: Male 37, Female 35, State 36
- Standard 6: Male 50, Female 51, State 50
- Standard 7: Male 52, Female 50, State 51

Appendix N (continued)

Performance on Math Standards by Gender

Tenth Grade